BOSTON
MEDICAL LIBRARY
8 THE FENWAY

Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/medicalannalsofd2519medi

MEDICAL ANNALS

of the

DISTRICT OF COLUMBIA

Official Publication of
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

VOLUME XXV
1956

EDITORIAL BOARD

WALLACE M. YATER, M.D., *Editor*
THEODORE WIPRUD, *Managing Editor*
A. LOUISE ECKBURG, *Assistant Editor*
FREDERIC G. BURKE, M.D.
FRANK D. COSTENBADER, M.D.
HUGH H. HUSSEY, JR., M.D.
WINFRED OVERHOLSER, M.D.
THOMAS M. PEERY, M.D.
HERBERT P. RAMSEY, M.D.
R. LEE SPIRE, M.D.
DONALD STUBBS, M.D.
CHARLES STANLEY WHITE, M.D.

EDITORIAL OFFICE, 1718 M STREET, N.W. WASHINGTON 6, D.C.

BOSTON MEDICAL
★ JU 12 1962 ★
LIBRARY

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *January,* 1956 NUMBER 1

THE CLINICAL ASPECTS OF SURGERY FOR CORONARY ARTERY HEART DISEASE*†

BERNARD L. BROFMAN, M.D.

Director of Cardiovascular Research, Mount Sinai Hospital, Cleveland, Ohio

EFFECTIVE TREATMENT for the patient with coronary artery heart disease must achieve 4 cardinal aims: (1) prolong life, (2) reduce invalidism and disability, (3) maintain productivity and well-being, and (4) relieve pain and discomfort.

Obviously, the ultimate solution is that of prevention of the occlusive process in the coronary arteries by medical means. Until this can be achieved, the patient with coronary artery heart disease must be given the benefit of any procedure which safely and effectively accomplishes the 4 aims. Standard medical therapy which always includes some degree of restricted activity may achieve aim number 4 at the expense of 2 and 3, with only questionable influence on 1. So-called radical measures such as thyroid ablation, by medical or surgical means, also may relieve pain and discomfort, but certainly at the expense of aims 2 and 3, and probably of 1. Neurosurgical procedures for interruption of pain pathways frequently achieve aims 4 and 3 for variable periods but unfortunately do not influence 1 and 2. It can be demonstrated that operation is a practical method for achieving all 4 aims.

In a fundamental sense, angina pectoris, myocardial infarction, and cardiac death are merely stages of involvement. Nor is there any obligate relationship between these stages and the degree of coronary artery disease, as Dr. Yater's studies[1] have so well demonstrated. The essential role of intercoronary arterial channels in preventing the catastrophic consequences of coronary artery heart disease emphasizes the protection afforded by a more equal distribution of the available coronary inflow.

This report is based upon observations on over 200 patients operated on for coronary artery heart disease with special reference to a series of 75 consecutive patients operated on since July, 1952 at Mount Sinai Hospital of Cleveland. Of these 75, the first 13 had the Beck II procedure, the remainder the Beck I.[2] The simplicity and lower operative mortality have made the latter the procedure of choice, in view of the equivalent degree of benefit provided. The relative safety of operation is demonstrated by a series of 37 consecutive patients without operative mortality. In the last 56 patients operated on there have been 3 deaths (5.4 per cent mortality). This mortality rate is probably an irreducible minimum in view of the spontaneous mortality in patients evaluated for operation. This is attested to by the fact that 6 other patients tentatively accepted as candidates for operation died either while awaiting admission to the hospital or before the day of operation.

---

* From the Eva and Irving Hexter Laboratory for Cardiorespiratory Research and the Divisions of Medicine and Surgery, Mount Sinai Hospital, Cleveland, Ohio.

† Delivered at the 25th Annual Scientific Assembly of The Medical Society of the District of Columbia, October 10, 1955.

Heretofore, any consideration of surgery in the treatment of coronary artery heart disease has been limited to patients with intractable angina or extensive muscle destruction. These patients are now recognized as the poorest candidates. The considerable benefit to be derived from operation can be demonstrated only with proper selection of patients. The unpredictability of the natural course of coronary artery heart disease and the lack of objective proof of benefit in the patient have resulted in a certain amount of skepticism from the standpoint of the internist. The long-standing conservative approach to this disease has resulted in a certain degree of therapeutic nihilism. Since the diagnosis of coronary artery heart disease carries with it the implication of sudden death or invalidism, such catastrophes are not considered unexpected or even preventable even in patients with "mild" disease. Despite a considerable mass of laboratory and clinical evidence of benefit, the operative approach is still considered by many to be "experimental" and "too drastic." This attitude is based upon an assumed high operative mortality expected in the course of such a major operation performed upon patients who are considered poor risks for any procedure. Any positive approach in the treatment of the disease must demonstrate not only effectiveness but a low operative mortality. The benefit derived from the Beck I operation has become apparent. The demonstration of a low mortality associated with operation, less than 6 per cent in this series, removes the last imposing barrier to elective application of this positive approach.

Operation is concerned with preventing areas of ischemia and mechanism death. In terms of total coronary flow, relatively small amounts of blood supplied to a critical area can prevent "electrical instability" of the heart and sudden death.[3] Operation cannot stop the occlusive process in the coronary arteries, nor can it restore dead muscle. If the heart is dilated and congestive failure supervenes, little can be accomplished by operation. Furthermore, the beneficial effects of operation may eventually be overcome by overwhelming occlusion.

Indications for Operation and Selection of Patients

The one indication for operation is a positive diagnosis of coronary artery heart disease. Operation should not be considered a salvage procedure to be applied only when medical treatment has failed. Ideally, operation is performed before there is any significant muscle damage. Early provision of a collateral circulation could save patients who would die of their first "coronary attack."

Classification of patients with coronary artery heart disease is particularly difficult. Consideration must be given not only to the degree of myocardial damage, but also to the progression of the occlusive disease in the coronary arteries. In general, the following broad classification has been found useful:

Group I: Mild disease. Usually under 50 years of age. Mild to moderate angina of effort. May have old infarct with little or no angina. (Operative mortality less than 3 per cent.)

Group II: Moderately advanced disease. One or more myocardial infarcts. Moderate to severe angina. May have bouts of coronary failure. (Operative mortality less than 5 per cent.)

Group III: Salvage. Poor operative risk, not much benefit expected. Extensive muscle damage. Sudden, recent progression of symptoms. Status anginosus. Specific contraindications. (Operative mortality approximately 12 per cent.)

Operation is specifically contraindicated if there is so much muscle destruction that congestive failure has occurred. The small amount of benefit that can be achieved does not justify the surgical risk.

Acute myocardial infarction, or even suspicion of impending infarction, absolutely precludes operation for a period of 4 to 6 months. In addition to the obvious dangers of operation during the acute stage, the delay permits natural development of collaterals. Operation is also particularly hazardous in patients with progressively severe anginal pain without demonstrable evidence of previous myocardial infarction. These patients are apt to develop areas of ischemia during or immediately after surgery. Presumably, because of complete lack of collaterals, these hearts are prone to "electrical instability" and sudden death. On the contrary, patients with extensive muscle destruction and some degree of cardiac enlargement have remarkably stable hearts and tolerate operation quite well. However, evidence of congestive failure usually means it is too late for much benefit.

The 75 patients operated in this series were classified as follows: Group I—5, Group II—44, Group III—26.

The age range was 28 to 72 years with an average of 48 years. In general, patients over the age of 65 are poorer risks. Likewise patients under the age of 40 usually have a particularly malignant form of coronary disease. In this series, 14 patients were under 40 years and 4 were over 60. Only 2 were females.

Generally, the diagnosis of coronary artery heart disease is established by the history. Electrocardiographic evidence of myocardial infarction merely confirms the diagnosis. Operation has been performed on a number of patients who had normal electrocardiograms, even after standard tolerance tests. At operation, myocardial scars are demonstrated frequently in patients with completely normal, serial electrocardiograms.

MEDICAL MANAGEMENT

Generally, a minimum number of diagnostic procedures should be carried out. If the diagnosis of coronary artery heart disease is positively established, such procedures as a gallbladder or gastrointestinal X-ray examination are superfluous and may be actually dangerous. If the routine electrocardiogram shows evidence of old myocardial infarction the diagnosis is confirmed. Such procedures as exercise tolerance tests should be carried out only in patients with normal electrocardiograms in whom there is doubt as to the diagnosis. Exhausting diagnostic studies do not constitute good preoperative management for a patient with coronary artery heart disease. In addition to routine examinations, cardiac fluoroscopy should be performed and venous pressure and circulation times determined.

Prior to operation the patient and his family must be informed in great detail not only as to what the operation can do, but also as to what it cannot do. Patients who exhibit marked anxiety have proved particularly poor risks.

All patients should be completely digitalized before surgery. This must be done even though there is no evidence of failure. Despite certain theoretical objections to the use of digitalis, in our experience digitalis does the following: (1) decreases the irritability of the heart, particularly during epicardial abrasion, (2) decreases the incidence of the various supraventricular arrhythmias occurring during induction and maintenance of anesthesia, (3) appears to aid in maintaining normal stroke volume and heart rate during operation, and (4) definitely increases the ease of resuscitation of dogs (and no doubt human beings) following cardiac arrest. In the opinion of surgeon, anesthesiologist and cardiologist, digitalized patients run a much smoother operative course than nondigitalized patients.[4]

During operation the surgeon, anesthesiologist and cardiologist observe close teamwork. Although the surgeon, of course, assumes the major responsibility, the cardiologist is in command. Continuous electrocardiographic observation (such as with the cardioscope) is essential. The operation is interrupted whenever necessary.

The appearance of alarming electrocardiographic changes (markedly prolonged intraventricular conduction, evidence of extensive ischemia) may be sufficient to cause termination of the operation at any given stage.

Postoperatively these patients do remarkably well. Except for the usual thoracotomy discomfort, convalescence is usually uneventful. The operation per se does not result in pericarditis pain. If pericardial effusion occurs, it drains into the left pleural cavity. However, only rarely is it necessary to perform a thoracentesis. On no occasion has pericardial tamponade occurred.

Operative Mortality

Of the 56 patients operated on at Mount Sinai Hospital in the last 2 years (since the Beck I became the procedure of choice) there have been 3 deaths associated with operation (mortality 5.4 per cent). None occurred on the operating table. All 3 deaths were in Group III salvage cases.

The first was a 47-year-old man with 2 previous myocardial infarctions and severe angina. Following induction of anesthesia there was a marked fall in blood pressure without spontaneous return. (Such an occurrence is now considered a specific contraindication to operation at any time.) Anesthesia was discontinued and operation deferred for 4 months, at which time induction of anesthesia was successfully performed. The patient tolerated the operation well but died suddenly 24 hours later. Autopsy revealed recent occlusion of the right coronary artery with old complete occlusions of the left circumflex and descending arteries.

The second mortality was that of a 72-year-old man with rapidly progressive angina without previous infarction. Although he tolerated operation well, sudden death occurred 4 days later. At autopsy complete coronary artery occlusion or myocardial infarction could not be demonstrated.

The third mortality was that of a 59-year-old man without proved myocardial infarction but severe angina pectoris for a year previous to operation. One week prior to operation he had a bout of extremely severe pain, but the electrocardiogram and sedimentation rate continued to be normal. He died only 24 hours after operation, and autopsy revealed recent occlusion of the left descending coronary artery.

Evaluation of Operative Results

As of October 1, 1955 the first 44 consecutive patients discharged from the hospital had been followed for periods of 10 to 38 months (average 20 months) since operation. Of these 44, only 2 are known to be dead, presumably of coronary artery heart disease. One other cannot be traced and is presumed dead. All 3 of these were salvage cases. Of the first 2, 1 died 7 months, the other 12 months after operation. Both showed some degree of improvement before death. This long-term mortality of 6.8 per cent (3 in 44) compares quite favorably with control mortality statistics in a similar group of patients on medical treatment, from which group a mortality of 25 per cent would be predicted for this time span.[5]

In these 44 patients the duration of symptoms of coronary artery heart disease ranged from 4 months to 13 years, with an average of 2.9 years. Angina of various degrees of severity ranging from mild to angina decubitus was present in 41 of the 44. In 36, 1 or more myocardial infarctions had been proved clinically.

Evaluation of Objective Studies

Serial electrocardiograms have been obtained in all patients before, during, and at regular intervals following surgery. As previously mentioned, preoperative evidence of a myocardial infarction merely confirms the diagnosis. Postoperatively, invariably there are characteristic changes of pericarditis with eventual return to the preoperative pattern. Obviously, electrocardiographic evidence of myocardial regeneration is not to be expected. However, it is significant that in less than 15 per cent of this group has there been evidence of further muscle destruction even after 3 years.

Early in this series, in an attempt to achieve a satisfactory objective method for evaluation, the standard exercise tolerance tests and the anoxemia tests were applied even in patients with evidence of previous myocardial infarction. However, the lack of correlation between these tests and the degree of coronary artery heart disease was discouraging. Furthermore, since the operative procedure results in a permanent pericarditis, electrical repolarization may be interfered with, so that ST segment changes following exercise are difficult to evaluate. In 6 patients with relatively normal control records who had positive exercise tolerance tests prior to surgery, subsequent exercise tolerance tests were completely negative in 3, questionably better in 2, and unchanged in 1. However, in 2 patients with relatively negative exercise tolerance tests prior to surgery, subsequent tests were positive despite marked clinical improvement.

The displacement, velocity, and acceleration ballistocardiograms (Arbeit apparatus) are routinely obtained before and subsequent to surgery. Generally, in the first week following operation, a characteristic deterioration is recorded. However, in approximately 15 per cent of the patients definite improvement over the preoperative tracing is seen during the second week. It was not anticipated that long-term studies would be of any value. However, in the first 20 patients studied, definite improvement in the ballistocardiogram was demonstrated in 8, there was no change in 8, and 4 were definitely worse, although there was no obligate correlation with the patient's clinical status.

Radiographically, there is remarkably little alteration of the cardiac configuration even immediately postoperatively. Only rarely is there evidence of pericardial effusion. Within 2 weeks the heart shadow returns to the preoperative configuration. Subsequent cardiac enlargement may occur in patients with significant hypertension or congestive failure due to extensive muscle damage.

In the long-term follow-up in no case was there evidence of a deleterious effect of the operation itself. Compression of the heart by a pericardial scar has not occurred.

Ultimate evaluation must be carried out in terms of the previously mentioned 4 cardinal aims. Even at this relatively early date it can be shown that life expectancy has been increased in patients operated on.

Of the 41 patients (of the original 44) known to be alive, previous to operation 16 had been able to work either full-time or more than half-time despite pain. The other 25 either worked less than half-time or not at all. (One of these was incapacitated more by fear of another attack rather than by pain.) Of the 41 patients, 27 are now working full-time at jobs ranging from digging in a coal mine to the practice of medicine. Ten others are able to do more work than before operation, and 4 are still unable to work (table 1).

TABLE 1
Evaluation of First 44 Patients

Pain			Ability to Work		
No pain	16	(36.5%)	Full-time	27	(61%)
Much less pain	22	(50%)	More work	10	(23%)
No change	3	(6.7%)	No better	4	(9.3%)
Dead	3	(6.7%)	Dead	3	(6.7%)
	44			44	

Likewise, 16 claim they have no heart pain. (Three of this group had no pain prior to operation.) Twenty-two say they have significantly less pain, and 3 are unimproved.

Of particular interest is the fact that 5 of these patients have subsequently had attacks clinically considered to be acute myocardial infarctions. However, in only 1 patient has there been electrocardiographic demonstration of a transmural infarct. This attack occurred 2 years after operation. The patient had little pain after the second day and was discharged in 3 weeks. Another patient has been hospitalized on 3 occasions in the 2 years since surgery. Each time he had sudden, severe precordial pain, associated with transient T-wave inversion in the precordial leads. Transmural infarction did not occur, and the patient was discharged in 1 to 2 weeks. The other 3 patients have also had 1 or more of such episodes, but only with transient electrocardiographic changes.

SUMMARY AND CONCLUSIONS

The Beck operation for coronary artery heart disease is a safe and effective method for providing a more adequate distribution of available coronary arterial blood supply to the heart. In preventing unequal oxygenation of contiguous areas of the myocardium, electrical stability of the heart is maintained.

Operation is indicated in patients with a positive diagnosis of coronary artery heart disease unless there is a specific contraindication. The operation should not be considered as merely a salvage procedure. Best results are obtained by operating early in the course of the disease.

Of the last 56 patients operated on, 3 died in the immediate postoperative period, giving an over-all operative mortality of 5.4 per cent. A lower mortality rate probably cannot be achieved, in view of the spontaneous mortality in such patients with severe coronary artery heart disease. In a series of 44 consecutive patients with a long-term follow-up of 10 months to 3 years, only 3 have died; 38 (86.5 per cent) have little or no pain; and 37 (84 per cent) are working either full-time or more than before operation.

In view of the proved effectiveness of the Beck operation for coronary artery heart disease, the demonstration of a very low operative mortality (5.4 per cent) removes the operation from the category of salvage procedures and justifies its early application to a majority of patients with the disease.

BIBLIOGRAPHY

1. YATER, W. M., BECK, C. S., LEIGHNINGER, D. S., AND BROFMAN, B. L.: Symposium on coronary arterial disease. Am. Rev. Tuberc. & Pulmonary Dis., 1955, **71**, 904.
2. BECK, C. S., AND LEIGHNINGER, D. S.: Operations for coronary artery disease. J.A.M.A., 1954, **156**, 1226.
3. BROFMAN, B. L., BECK, C. S., AND LEIGHNINGER, D. S.: Electric instability of the heart. The concept of the current of oxygen differential in coronary artery disease. Circulation, in press.
4. BROFMAN, B. L.: Routine preoperative digitalization in the aged, to be published.
5. LINDGREN, J.: Angina pectoris: clinical study with particular reference to neurosurgical treatment. Acta med. scandinav., 1950, **138**, 1.

CLINICAL PERSPECTIVES IN CHRONIC ULCERATIVE COLITIS*

IRVING B. BRICK, M.D.

Associate Professor of Medicine, Georgetown University School of Medicine; Chief, Gastroenterology Clinic, Georgetown University Medical Center

CHRONIC ULCERATIVE COLITIS is a disease with many interesting and enigmatic facets. It is not a common disease, and the limitation of the understanding of the characteristics of this entity by the average practicing physician is due to his infrequent contact with the disease. In the past 10 years I have had the opportunity to observe, for varying periods, approximately 100 patients on whom are based the observations in this paper. This is admittedly a rather trifling experience when compared with over 2,000 cases of this disease reported by Bargen.

Although there have been many proposed theories of etiology varying from that of food allergy and enzymes, such as lysozyme, to various specific bacterial organisms, most authorities accept the fact that we really do not know why people get this disease. The question is frequently asked whether ulcerative colitis is caused by or is a residual of amebiasis or bacillary dysentery. Proof for either of these diseases is lacking in most of the carefully studied cases of ulcerative colitis, although in an occasional case the evidence may appear to be present. That underlying psychiatric or psychosomatic factors are important in exciting recurrences, and possibly in causing the onset, apparently more in some cases than in others, is accepted by most students of the disease, but again these do not explain fully the disease, why certain people have it, nor the complications. A curious fact is that patients with the irritable colon syndrome (also called erroneously, I believe, spastic colitis and mucous colitis), a common and wholly psychosomatic disorder, very rarely if ever end up with ulcerative colitis though they have their bowel trouble for many years.

This is a disease of young people and children, most of the cases beginning between the ages of 10 and 30 years. In my experience it is uncommon in Negroes, only 6 of the 100 patients being of that race. Otherwise, the sexual and racial distribution is not remarkable. Only once were 2 siblings noted with the disease in this series. The effect of pregnancy on the disease is variable, the condition deteriorating in some cases, while remaining in remission or causing little difficulty in others.

Clinical Types and Course

The acute attack. There is a wide spectrum of clinical types of cases in this disease. The average patient presents himself to the doctor in an acute phase with loose, frequent bowel movements. Constitutional symptoms of severe fever, tachycardia, anorexia, and weight loss, often of a sizable fraction of the total body weight, are present. In most of these cases a careful history discloses that prior to the acute illness blood in the stools with or without diarrhea, abdominal cramps, and anorexia were present for weeks or months, although on occasion the onset is of short duration. In the average case the first acute attack of this sort is a dramatic and horrible illness, since the blood loss and constitutional symptoms leave the patient weak, anemic and emaciated.

The important characteristic of most of these cases that is not well recognized by physicians is the natural spontaneous tendency for remission. The rather unusual patient with a fulminating case may continue rapidly downhill, with or without treatment, to death caused by perforation or hemorrhage, but in the average case the acute attack subsides, even without much therapy. We must always remember this trait of remissions and exacerbations in attempting to evaluate therapy lest we be fooled into believing that this or that drug or method of therapy is efficacious for all cases.

---

* This is the third of a series of comprehensive reference articles on topics of current medical interest prepared by invitation for the MEDICAL ANNALS.

The insidious type. Not all patients will have had an acute attack. This type may have been first noted by the patient because of blood in the stool. The blood in ulcerative colitis is usually bright to dark red, since in approximately 90 per cent of the cases the distal 35 cm. of the bowel is involved. In a goodly number of patients in this group the disease may remain confined to the rectum or rectosigmoid area. The presence of blood in the stool is the predominant finding, since diarrhea may be absent for long periods of time or may just be present with the full-blown acute attack. Recently a girl of 17 was seen who was in her second acute episode of the disease with bloody diarrhea. Two years previously she had undergone the first acute attack, and before, during, and after that attack, until the present episode, she was constipated. Thus, diarrhea, although common in the disease, does not have the primary significance of blood, as Engel has recently indicated.

In the insidious variety the ravages in the colon occur more slowly, and the disease is not the dramatic affair as above described. Eventually, however, mechanical problems of the spastic, shortened, and, on occasion, obstructed colon step up the tempo of the symptomatology, particularly with respect to the frequency of bowel movements.

However, in some of the cases of this variety, aside from the passage of blood or occasional diarrhea, the patient's general health remains good. This may be a variety quite different from that which we consider to be chronic ulcerative colitis, since only a small area of the rectum may be involved, truly a granular proctitis. That it may spread and become clinically more extensive leads me to consider this disease as part of this group.

Atypical types. That there are constitutional manifestations and extra-colonic complications is well known and will be discussed later. Awareness of these manifestations is important if we are to suspect the atypical variety. The attack of ulcerative colitis, if we think only of diarrhea or bloody diarrhea as the chief finding, may be overlooked unless we know about these complications. Fever of undetermined origin due to ulcerative colitis, with few bowel symptoms, has been well documented by Crohn. Attacks of recurrent erythema nodosum, especially of the legs, may be the chief manifestation in some cases, and if the more common causes are eliminated, ulcerative colitis should be remembered. Recently a patient was seen in consultation from an eye service because of a rather unimpressive diarrhea with occasional blood in the stool. The patient, a man of 33, had had 3 attacks of iridocyclitis and uveitis in the past 4 years. With these attacks some bowel symptoms were noted, but only in the present attack were these symptoms thought to be significant enough to warrant more than cursory investigation. This man had moderately extensive involvement of the distal half of the colon, with findings quite diagnostic of the disease. In another case arthritic complaints predominated, and together with a mitral systolic murmur were felt to represent recurrent attacks of rheumatic fever. A mild diarrhea which was experienced with the attacks was not investigated fully for 4 years, at which time an unequivocal diagnosis of chronic ulcerative colitis was established.

In a small group of cases, about 10 to 15 per cent of the total, the rectum is uninvolved, at least initially. Here the transverse or descending colon or other areas of the colon are affected. The symptoms may be less colonic and more constitutional in nature. Diagnosis is more difficult,

Dr. Brick

DR. BRICK is both teacher and practitioner of medicine. He has been a member of the faculty of Georgetown University School of Medicine since 1947 and is presently Associate Professor of Medicine and Chief of its Gastroenterology Clinic. His interests also extend to research. He is a founder member of the newly organized Gastroenterology Research Group.

Dr. Brick graduated from George Washington University School of Medicine in 1941. From 1942 to 1943, and again in 1946–47, he was on the Medical Service of Boston City Hospital (Boston University), where he served under his present chief, Dr. Harold Jeghers. At Harvard Medical School he received special training in gastroscopy and peritoneoscopy.

During World War II he served in the Army Medical Corps for 3½ years. Twenty-six months of that time was spent overseas in the South Pacific Theater. When discharged as Major, he was Chief of the Gastrointestinal Section at Walter Reed Army Hospital.

A diplomate of the American Board of Internal Medicine, he has been certified both in internal medicine and the subspecialty, gastroenterology. His main interests have been clinical investigations in liver disease, endoscopic approaches in gastrointestinal tract diseases, and the problem of gastrointestinal hemorrhage.

Dr. Brick was born in California and grew up in Florida. This unusual circumstance may account for his interest in sports, he being a handball and squash enthusiast. He exhibits, with pride, a trophy obtained as 1955 Doubles Champion in the handball tournament of the Pentagon Officers Athletic Club.

since it is solely an X-ray diagnosis. This variety is called regional or segmental colitis.

In all of these types the tendency is for remissions to appear, albeit the residuals of each acute attack leave its mark on the colon. However, there is not necessarily a spread of the disease to adjacent sites of the colon, and so, rather surprisingly, in some cases of many years' duration the disease remains confined to the same segment. In other cases, in a short period of time there may be extensive spread. In only a very few cases when the colon is involved by this process is the remission complete, with reversal to normal rectum or colon.

COMPLICATIONS AND EXTRA-COLONIC MANIFESTATIONS

Table 1 lists the various major complications which may occur. It is quite obvious that treatment may have to be altered because of these complications. In addition to the lesions noted, Bargen and his associates in careful autopsy studies have shown that frequently the kidney and pancreas have nonspecific abnormalities in ulcerative colitis.

TABLE 1

Complications and Extra-colonic Manifestations of Ulcerative Colitis

A. Colonic
  1. Anal fissures and fistula
  2. Perirectal abscess
  3. Pseudopolyposis
  4. Polyposis
  5. Carcinoma
  6. Massive hemorrhage
  7. Stricture
  8. Perforation with or without abscess formation
  9. Peritonitis
  10. Megacolon
B. Extra-colonic manifestations
  1. Erythema nodosum
  2. Stomatitis
  3. Arthritis
  4. Skin sloughing—pyoderma gangrenosum
  5. Uveitis, iritis, iridocyclitis
  6. Cirrhosis
  7. Gynecomastia
  8. Amyloidosis
  9. Thrombophlebitis

Anal complications. The anal complications are very distressing, giving rise to much discomfort. Surgery for these conditions should not be done while the colitis is active, since incontinence may be the result. Healing of tissue is poor and sloughing common following surgery while the colitis is active. Although not always satisfactory, conservative measures serve the patient's best interest.

Polyps and cancer. The problem of the development of adenomatous polyps and cancer is a real one here and one of the dread complications. With reference to polyps, these should, if diagnosed, be removed surgically. However, in many chronic cases pseudopolypoid changes due to the reparative process occur. These mucosal changes may be diagnosed by sigmoidoscopy or X-ray examination but are not believed to be a positive indication for colectomy, as used to be thought. It is not thought that pseudopolyposis has the same tendency for malignant degeneration as true adenomatous polyps.

Cancer occurring in chronic ulcerative colitis has been rather rapidly fatal, even when diagnosed at what appeared to be an early stage, in my experience. The 4 patients I have seen have died within a year despite adequate surgery. The exact frequency of development of cancer is not known, but there is little question that the longer a person lives with chronic ulcerative colitis, the greater is the frequency. After 10 years of the disease the frequency of cancer increases sharply over the group having the disease a shorter period of time. Since this is a disease of youth, cancer of the colon develops in this group 10 to 15 years on the average sooner than it does in the general population and the prognosis is much poorer, in view of present-day results in colonic cancer surgery.

Megacolon. An important but little recognized complication is a megacolon-like bowel. Usually this occurs in patients with acute disease, with marked distention of the abdomen being noted clinically. The flat X-ray film of the abdomen reveals massive loops of dilated bowel, having the appearance of megacolon. In this series there have been 4 such cases, and all of these patients were very ill. I believe its presence to be a positive indication for surgery, since it probably indicates thrombotic changes in the submucosa with necrosis or perforation either present or impending. The dilatation of the bowel probably occurs because of marked atonicity. It also obviously means rather acute disease in a comparatively fresh case, since the shortened, tubular and scarred colon of chronic disease would not be capable of such massive dilatation. I believe ileostomy to be indicated in such cases as a preparatory step for total colectomy.

Other colonic complications. Massive hemorrhage is infrequent, and in this series none has died of this complication. It occurs in some of the acute fulminating cases. Stricture of the colon is also infrequent, usually occurring in cases that have been active for long periods of time with marked shortening of the colon. Perforation and abscess formation is a dire complication. In the fulminating variety open perforation with massive peritonitis is a not infrequent cause of death. In the chronic cases the perforation is a slow penetration with abscess formation that may be remediable by adequate surgical approach.

Skin lesions. Sloughing of the skin may be present in some acute instances. Small or large areas of the extremities and body may be involved, with the skin complication becoming a major problem. In a middle-aged woman the skin sloughing was so extensive that generalized sepsis and death ensued. Figure 1 shows the more localized variety on the leg of pyoderma gangrenosum in a man of 20 who had similar lesions on the neck and arms.

A most fascinating skin lesion is that of erythema nodosum, which is most usually seen on the lower extremities. Our experiences with this finding at Georgetown University were recently reported, and we found it to be more frequent than previously believed, being present in 7 of a group of 37 patients studied. Arthralgias and conjunctivitis not infrequently accompanied the skin lesions. Usually these lesions were more severe and numerous with exacerbations of colitis, but not infrequently they occurred even when the colitis was well controlled. Steroid therapy could control the lesions, but cessation of such therapy was followed in most cases by recurrence of the erythema nodosum.

Other extra-colonic manifestations. Ulcerative stomatitis may occasionally interfere with ingestion of food. Arthralgias are common, and less frequently a true arthritis, simulating the rheumatoid variety, may demand strenuous efforts to control the colitis. Various eye manifestations have already been noted. Cirrhosis, as a complication of ulcerative colitis, has been reported increasingly more frequent in the past several years. The nutritional problem, with great losses of protein, the superimposed inflammatory involvement with absorption of abnormal elements from the intestine via the enterohepatic circulation, undoubtedly contribute to the genesis of cirrhosis in these patients. In the few cases of histologically proved cirrhosis in ulcerative colitis that we have seen, the type of cirrhosis is similar to that following viral hepatitis, postnecrotic cirrhosis, rather than the classical Laennec's variety. Gynecomastia has been reported in ulcerative colitis, probably in part as a manifestation of liver abnormalities in estrogen metabolism. Rarely, massive thrombophlebitis has been reported. As in other chronic diseases, amyloidosis may infrequently complicate ulcerative colitis.

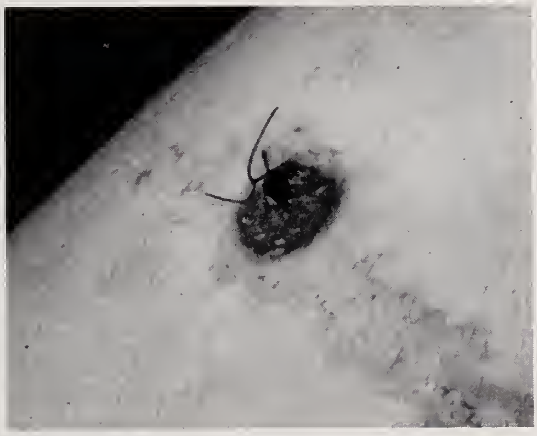


FIG. 1. Typical sloughing skin lesion (pyoderma gangrenosum) in a patient with chronic ulcerative colitis.

DIAGNOSIS

Clinical symptoms. This disease should be suspected in young adults or children in any case of persistently bloody stools, with or without diarrhea. Diarrhea may be a late symptom in the disease, depending on the severity, extent and location of the disease. In some instances, usually early in the course, constipation precedes diarrhea until the lesions are more extensive. Crampy abdominal pains, the presence of anal fistulae unresponsive to treatment, and the constitutional symptoms of weight loss, fever and weakness, as well as extra-colonic manifestations involving the eyes, joints and skin may make the diagnosis more obvious. Headache as a symptom is not mentioned much in the literature, but Engel has indicated its frequency and psychologic significance in this group, especially between acute attacks of the disease.

Sigmoidoscopy. Since in approximately 90 per cent of cases the distal 30 cm. of the colon-sigmoid and rectum is involved, the *sine qua non* of diagnosis is sigmoidoscopy. The presence of a diffuse inflammatory process with widespread ulcerations and purulent exudate is pathognomonic of activity. In the involved segment the usually well-seen vascular markings are wiped out. In between the areas of frank ulceration the mucosa may be granular and polypoid. In early cases only a diffuse hyperemia may be seen. Characteristically, the mucosa is quite friable, the passage of the scope or a cotton applicator causing oozing of blood. There may be a great deal of spasm, particularly in early active cases, and it is advisable to pass the sigmoidoscope only as far as the lumen can be clearly seen. During remission the hyperemia subsides but less frequent ulcerations and, particularly, granularity of the mucosa may be noted. Suspicious polypoid areas or definite polyps should always be examined by biopsy. In some instances only the ampulla of the rectum may be involved, while in others the disease will be found sigmoidoscopically more proximally, especially near the rectosigmoid area. In cases of regional or segmental colitis sigmoidoscopy will be negative.

In patients having diarrhea no preparation is necessary prior to sigmoidoscopy. If cleansing is needed, I prefer the use of warm tap-water enemas gently given. In the active cases and in many of the cases in remission a characteristic foul odor, as of necrotic tissue, is apparent to the examiner.

X-ray examination. Roentgen findings are most important to delineate the extent of the disease, the possible complications, and in cases of regional or segmental colitis to make the diagnosis. As previously pointed out, sigmoidoscopy will give the diagnosis in 90 per cent of the cases. The findings of shortening of the bowel, lack of haustral markings, serrated edges indicating ulcerations, areas of spasm and stricture, and segments of the colon involved are what we learn from barium X-ray examination. A flat plate of the abdomen prior to the barium enema is helpful and in the extremely ill patient will be sufficient, with sigmoidoscopy, to ascertain the presence of dilated loops of colon, an X-ray sign with a poor prognostic significance. If the terminal ileum is not delineated well by barium enema, it is important to have a barium swallow study to learn whether the ileum is involved, as it is in about 15 per cent of cases. The usual laxative in preparing patients for a barium enema should be withheld when ulcerative colitis is suspected.

It is well known that the barium enema study of the rectal segment is not reliable. Since in many of the cases, especially the early ones, the disease process is confined to the rectum, reliance on the barium enema examination for diagnosis will result in missing the diagnosis. Sigmoidoscopy is the only sure way to diagnose these cases. I think the X-ray examination is complementary to sigmoidoscopy but should not be considered as replacing it.

Differential diagnosis. Warm-stage examination of the stool for amebae and culture for bacterial pathogens, especially Shigella, is important in ruling out conditions which may simulate ulcerative colitis. Although the sigmoidoscopic findings in acute bacillary and amebic dysentery may simulate ulcerative colitis, specific treatment should be withheld until the causative agent is isolated. In most cases the stool examination is negative. Other causes of diarrhea or bloody stools will be eliminated by the sigmoidoscopic and X-ray features.

THE PSYCHE AND ULCERATIVE COLITIS

A great deal has been written about the psychosomatic factors in this disease, and many psychiatric formulations have been presented to explain the disease. Formulations based on diarrhea are faulty, according to Engel, since diarrhea is not a prime factor in the disease but merely a secondary result of the somatic process. Psychiatric studies of patients with ulcerative colitis demonstrate impressively defects in personality structure prior to the onset of the colitis, dependency and constricted relationship with people, consistent psychopathology in the mothers with a peculiar relationship of mother to patient, and difficulties in achieving full heterosexual development. Acknowledging these psychiatric factors, which vary greatly in individual patients, the most difficult problem for doctors to accomplish is the jump from these psychic phenomena to the physical phenomena encountered in the disease. Ulcerative colitis is a disorder involving primarily mucosa and submucosa of the large bowel with prominent implication of the vascular system, since hyperemia and hemorrhage are identifying features of the disease. At present we lack the key to understanding the mechanism whereby the psychic phenomena are transformed into or cause the physical phenomena.

Ulcerative colitis and "momism." I have been impressed by the personality of the mother and the relationship of the patient to his mother in this disease. It must be stated that the relationship to be described is found in about half of our cases. These mothers usually dominate the family, although in some instances the domination is more complete with reference to the patient. I have been impressed with the fact that the mothers often make the office visit with the patient and are much more talkative about the patient's condition, what he is eating, and the number of stools daily, than is the patient. The mother makes most of the phone calls, too, with reference to treatment or to advise the doctor about developments. These women tend also to be pessimistic, worrisome, and unduly preoccupied with the symptoms of the disease. In several instances separation from the mother has been beneficial for the patient. A divorced woman of 38 went to Florida, leaving her mother's home, and despite little therapy improved greatly. Returning home at the mother's urgent pleading of illness, an exacerbation occurred after 2 months. Another sojourn in Florida with recovery and realization that the complete dominance by her mother was not helping her convinced her that it was not so much the Florida climate as the distance from mother that was so salubrious. In another instance, explanation to the mother, separated from her husband, that her 18-year-old son did not wish to be completely at her beck and call, did not wish to sleep in the same bedroom with her, and wanted a semblance of independence in decisions relating to his future aided in a rapid and prolonged remission of severe disease. It appears to me that patients in such a relationship with their mothers build up a great deal of hostility. Since the mores of our society are such that everyone must love his mother, at least outwardly, this hostility is repressed and not expressed overtly. Is the expression of this hostility in the form of the vascular and mucosal changes leading to the clinical picture we know? The how of its occurrence is what eludes us.

TREATMENT

Since there is no specific cause, there is no specific therapy over and above the use of drugs and treatment of complications. The doctor's role must take into consideration the psychosomatic factors in the patient. Formal psychotherapy will be rarely resorted to and in the acutely ill patient would be of little value, if not harmful. The doctor must lend support to the patient in trying times. He must be reliable, optimistic, calm and confident. Frequent visits to the patient, sitting rather than standing at the bedside, and keeping the set appointment are important assets. Personal attention to the patient's food, eating, drugs and other physical care is important. I believe the family physician or internist will, in most cases, be able to supply the simple psychotherapy of assurance that these patients, who most of all fear rejection, require.

In treating the inflammatory aspects of the disease, the use of antibiotics and sulfonamides is advocated, but it should be realized that none is curative. I prefer the use of salicylazosulfapyridine (Azulfidine) in dosage of 1.0 Gm. 4 times daily. This drug has a marked affinity for connective tissue, and since the main changes in ulcerative colitis are in the submucous connective tissue, concentration of the drug is highest here. Several workers, including Bargen, have found it helpful, especially in the subacute phase of the disease.

Nutritional repair is one of the outstanding therapeutic tasks in this disease. Losses of nitrogen and electrolytes in the stool are copious and must be replaced. Judicious blood and albumin transfusions may be helpful. I believe in a liberal dietary regimen, allowing the patient to have what he desires and will eat, and avoiding foods that he knows have caused difficulty in the past. In severe cases parenteral feedings may have to be given for varying periods of time, especially when there is ileus or signs of impending perforation. Electrolyte imbalances must be detected and corrected.

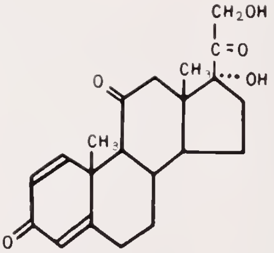
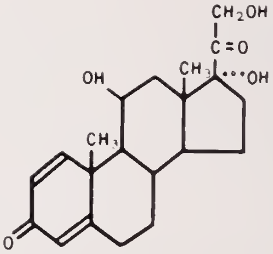
Steroid therapy. The introduction of the various steroid substances in the treatment of ulcerative colitis has been, on the whole, a beneficial advance. However, especially in the acutely ill patient, recognition of the possibility of giant ulceration of the colon with penetration and perforation as a complication of this therapy should make one proceed with caution. It is in the very ill patient, though, that the drug can be most beneficial. In my practice I always use an antibiotic or one of the sulfonamides, preferably Azulfidine, when I use the steroids. On empirical grounds alone, several workers have found

ACTH (adrenocorticotropic hormone) more beneficial than cortisone. The use initially of 20 units of ACTH given intravenously in 1,000 c.c. of dextrose in water or normal saline over a 6- to 8-hour period gives reliable steroid therapy. This can be switched to the intramuscular ACTH gel in several days in doses of 30 to 40 units. Intravenous therapy gives assurance of absorption. In about 2 weeks the steroids are discontinued after a gradual reduction.

Recently, early in the acute phase and especially in the convalescent phase or with beginning exacerbations, I have been using Meticorten (prednisone) or Meticortelone (prednisolone) in oral doses of 15 to 20 mg. daily. I found these drugs particularly helpful in maintenance therapy when there were symptoms suggesting the possibility of an exacerbation or the incompleteness of the remission. When arthralgias and erythema nodosum are present, it has been particularly beneficial for these complications. With the introduction of several new trade names and brands of these steroid drugs on the market, it is believed of advantage to tabulate the various products, as has been done in table 2. The advantages of the smaller dose with potent stimulation, oral administration, and freedom from water and salt retention and potassium excretion make these newer steroids easier to use, safer, and just as effective as the older substances.

TABLE 2

Identification of the Meti Steroids

Generic Name	Prednisone (formerly metacortandracin)		Prednisolone (formerly metacortandralone)	
Formula				
Chemical name	$\Delta^{1,4}$-pregnadiene-17α,21-diol-3,11,20-trione		$\Delta^{1,4}$-pregnadiene-11β,17α,21-triol-3,20-dione	
Chemistry	Odorless white to cream-white crystalline or amorphous powder that decomposes with liquefaction at 225° C.		Odorless white to cream-white crystalline or amorphous powder that decomposes with liquefaction at 235° C.	
Trade names	Meticorten	1954	Meticortelone	1954
	Deltasone	1955	Delta-Cortef	1955
	Deltra	1955	Hydeltra	1955
			Sterane	1955

It must be remembered that, in evaluating any therapy in this disease, spontaneous remissions do occur. Steroids certainly offer no cure but seem to hasten the period of remission, and with the newer steroids maintenance therapy has become more practicable.

Surgery. The need for surgery for the complications of severe hemorrhage, perforation, stricture, the fulminating case not rapidly controlled, and cancer requires no comment. The difficult decisions involve "medical intractability" and possibly the risk of cancer. A definition of medical intractability is difficult to put on paper, but I believe it should entail continuous medical care and psychologic support for 18 to 36 months without improvement. The patient's status should then be compared to the possible problems following ileostomy and colectomy. The patient should be prepared psychologically to accept ileostomy, and, except in emergencies, the prolonged medical regimen, if without success, is part of the preparatory period. If possible, discussion with other patients who have adjusted well to ileostomy is advisable. Furthermore, I believe that colectomy is also necessary either at the time of ileostomy or as a second stage, when surgery has been decided upon. The chances of later reëstablishing continuity of the bowel in this disease once an ileostomy has been done are remote. Polyps should be removed in all instances, but the question of prophylaxis for cancer, even in chronic cases with pseudopolyposis, is not settled at present.

SELECTED BIBLIOGRAPHY*

General Considerations

Abramson, D., Jankelson, I. R., and Milner, L. R.: Pregnancy in idiopathic ulcerative colitis. Am. J. Obst. & Gynec., 1951, **61**, 121.

Crohn, B. B., Garlock, J. H., and Yarnis, H.: Right-sided (regional) colitis. J.A.M.A., 1947, **134**, 334.

Editorial: Lysozyme. Ann. Int. Med., 1952, **37**, 813.

Felsen, J., and Wolarsky, W.: Bacillary dysentery and ulcerative colitis: their occurrence among military and associated personnel, World War II. Gastroenterology, 1947, **9**, 557.

Ginsberg, M. S., and Ivy, A. C.: Etiology of ulcerative colitis. analytical review of the literature. Ibid., 1946, **7**, 67.

Kalil, T. H., and Robbins, L. L.: Early roentgenologic changes in idiopathic ulcerative colitis. Radiology, 1949, **53**, 1.

Kirsner, J. B., Palmer, W. L., and Klotz, A. P.: Reversibility in ulcerative colitis. Ibid., 1951, **57**, 1.

Machella, T. E.: Problems in ulcerative colitis. Am. J. Med., 1952, **13**, 760.

McCready, F. J., Bargen, J. A., Dockerty, M. B., and Waugh, J. M.: Involvement of ileum in chronic ulcerative colitis. New England J. Med., 1949, **240**, 119.

Posey, E. L., and Bargen, J. A.: Metabolic derangements in chronic ulcerative colitis. Gastroenterology, 1950, **16**, 39.

Ricketts, W. E., Kirsner, J. B., and Palmer, W. L.: Chronic nonspecific ulcerative colitis. Ibid., 1948, **10**, 1.

Warren, S., and Sommers, S. C.: Pathogenesis of ulcerative colitis. Am. J. Path., 1949, **25**, 657.

Complications

Ball, W. P., Baggenstoss, A. H., and Bargen, J. A.: Pancreatic lesions associated with chronic ulcerative colitis. Arch. Path., 1950, **50**, 347.

Counsell, P. B., and Dukes, C. E.: Association of chronic ulcerative colitis and carcinoma of rectum and colon. Brit. J. Surg., 1952, **39**, 1.

Felsen, J., and Wolarsky, W.: Suppurative pylephlebitis with bacteremia in chronic ulcerative colitis. Ann. Int. Med., 1950, **33**, 211.

Foster, J. J., and Brick, I. B.: Erythema nodosum in ulcerative colitis. Gastroenterology, 1954, **27**, 417.

Jackman, R. J., and Mayo, C. W.: Chronic ulcerative colitis—anorectal complications. Surg., Gynec. & Obst., 1954, **98**, 1.

Jensen, E. J., Baggenstoss, A. H., and Bargen, J. A.: Renal lesions associated with chronic ulcerative colitis. Am. J. M. Sc., 1950, **219**, 281.

Jensen, E. J., Bargen, J A., and Baggenstoss, A. H.: Amyloidosis associated with chronic ulcerative colitis. Gastroenterology, 1950, **15**, 75.

Lyons, A. S., and Garlock, J. H.: Relationship of chronic ulcerative colitis to carcinoma. Ibid., 1951, **18**, 170.

Mandelbaum, I., and Bryk, D.. Idiopathic chronic ulcerative colitis and amyloidosis. J. Mt. Sinai Hosp., 1955, **22**, 24.

Marshak, R. H., Lester, L. J., and Friedman, A. I.: Megacolon, a complication of ulcerative colitis Gastroenterology, 1950, **16**, 768.

Rice-Oxley, J. M., and Truelove, S.: Complications of ulcerative colitis. Lancet, 1950, **1**, 607.

Ricketts, W. E., Kirsner, J. B., and Rothman, S.: Pyoderma gangrenosum in chronic nonspecific ulcerative colitis. Am. J. Med., 1948, **5**, 69.

Ricketts, W. E., and Palmer, W. L.: Complications of chronic nonspecific ulcerative colitis. Gastroenterology, 1946, **7**, 55.

Sauer, W. G., and Bargen, J. A.: Chronic ulcerative colitis and carcinoma. J.A.M.A., 1949, **141**, 982.

Tumen, H. J., Monaghan, J. F., and Jobb, E.: Hepatic cirrhosis as complication of chronic ulcerative colitis. Ann. Int. Med., 1947, **26**, 1947.

Wasserman, F., Krosnick, A., and Tumen, H.: Necrotizing angiitis associated with chronic ulcerative colitis. Am. J. Med., 1954, **17**, 736.

The Psyche in Ulcerative Colitis

Engel, G. L.: Psychologic aspects of management of patients with ulcerative colitis. New York State J. Med., 1952, **52**, 2255.

---

* Editor's note: In this series the bibliography will be presented more fully than customary so that reference material can be readily identified.

ENGEL, G. L.: Studies of ulcerative colitis. I. Clinical data bearing on nature of somatic process. Psychosom. Med., 1954, **16**, 496; II. Nature of somatic processes and adequacy of psychosomatic hypotheses. Am. J. Med., 1954, **16**, 416; III. Nature of the psychologic processes. Ibid., 1955, **19**, 231.

GROEN, J., AND BASTIAANS, J.: Psychotherapy of ulcerative colitis. Gastroenterology, 1951, **17**, 344.

KARUSH, A., HIATT, R. B., AND DANIELS, G. E.: Psychophysiological correlations in ulcerative colitis. Psychosom. Med., 1955, **17**, 36.

MAHONEY, V. P., BOCKUS, H. L., INGRAM, M., HUNDLEY, J. W., AND YASKIN, J. C.: Studies in ulcerative colitis. I. Study of personality in relation to ulcerative colitis. Gastroenterology, 1949, **3**, 547.

PAULLEY, J. W.: Ulcerative colitis; a study of 173 cases. Ibid., 1950, **16**, 566.

SLOAN, W. P., BARGEN, J. A., AND GAGE, R. P.: Life histories of patients with chronic ulcerative colitis: review of 2,000 cases. Ibid., 1950, **16**, 25.

MEDICAL TREATMENT

BARGEN, J. A.: Symposium on gastrointestinal conditions; treatment of ulcerative colitis with salicylazosulfapyridine (salazopyrin). M. Clin. North America, 1949, **33**, 935.

ELLIOTT, J. M., AND GIANSIRACUSA, J. E.: ACTH and cortisone in treatment of ulcerative colitis: evaluation of their prolonged administration. New England J. Med., 1954, **250**, 969.

GRAY, S. J., REIFENSTEIN, R. W., BENSON, J. A., AND YOUNG, J. C. G.: Treatment of ulcerative colitis with corticotropin (ACTH) and cortisone. J.A.M.A., 1952, **17**, 1489.

JONES, F. A., Ulcerative colitis. California Med., 1955, **82**, 430.

KIRSNER, J. B., AND PALMER, W. L.: Ulcerative colitis: therapeutic effects of corticotropin (ACTH) and cortisone in 120 patients. Ann. Int. Med., 1954, **41**, 232.

MARSHALL, H. C., KIRSNER, J. B., AND PALMER, W. L.: Chemotherapy in chronic ulcerative colitis. M. Clin. North America, 1951, **35**, 257.

MILLER, T. G.: Management of patients with chronic nonspecific ulcerative colitis. Ibid., 1953, **37**, 1777.

SVARTZ, N.: Treatment of ulcerative colitis. Gastroenterology, 1954, **26**, 26.

TRUELOVE, S. C., AND WITTS, L. J.: Cortisone in ulcerative colitis: preliminary report on therapeutic trial. Brit. M. J., 1954, **2**, 375.

TULIN, M., KERN, F., AND ALMY, T P.: Perforation of bowel during treatment of ulcerative colitis with corticotropin. J.A.M.A., 1952, **150**, 559.

WIRTS, C. W., REHFUSS, M. E., AND YANTES, H. A.: Long-term results in corticotropin-treated ulcerative colitis. J.A.M.A., 1954, **154**, 36.

SURGICAL TREATMENT

AYLETT, S. O.: Conservative surgery in treatment of ulcerative colitis. Brit. M. J., 1953, **2**, 1348.

BROWN, C. H., GLECKLER, W. J., AND JONES, T. E.: Surgical treatment of chronic nonspecific ulcerative colitis; results in 106 cases. Gastroenterology, 1950, **14**, 465.

COUNSELL, P. B., AND GOLIGHER, J. C.: Surgical treatment of ulcerative colitis. Lancet, 1952, **2**, 1045.

GARLOCK, J. H., AND LYONS, A. S.: Role of surgery in therapy of ulcerative colitis. Gastroenterology, 1953, **26**, 709.

ROGERS, A. G., BARGEN, J. A., AND BLACK, B. M.: Chronic ulcerative colitis: early and late experiences of 124 patients with ileac stomas. Ibid., 1954, **27**, 383.

SHAVER, W. A., AND FERGUSON, L. K. Surgical viewpoint in ulcerative colitis. Am. J. Proctology, 1954, **5**, 215.

STUDIES IN SICKLE CELL ANEMIA[*]

IX. Preliminary Evaluation of Psychologic Aspects

FRED CUTTER, A.M.
HARRIETTE M. CLARK, M.D.
ROLAND B. SCOTT, M.D.
CLARENCE S. GREENE, M.D.
Washington

THE MORBID EFFECTS of sickle cell anemia[†] have been studied in many ways, but to our knowledge there have been no investigations of the psychologic functioning of patients with this disease. This paper describes a preliminary attempt to isolate those psychologic deficits that may be associated with this illness. Because this is a pilot study, a systematic research design was not followed. We elected to include in the test battery those technics that yield qualitatively rich, but quantitatively meager data. This seemed to be consistent with the exploratory nature of the study.

Four children with SCA and 2 children with sickle cell trait between the ages of 6 and 14 years were tested. They were chosen at random, and the diagnosis was confirmed by electrophoretic analysis. Since the total number of children with SCA actively followed by this service is approximately 35, the sample tested is considered fairly representative of the typical patient carried by this service. Naturally, the small series makes interpretation of our findings tentative and subject to further verification.

The working hypotheses were derived in the following way: A typical characteristic in SCA is a low hemoglobin concentration and consequently the impaired capacity of the individual's vascular system to supply the optimum oxygen needs of the body. The hemoglobin concentration is often as low as one half of normal and this state may exist for many years, except for those periods immediately following transfusion. It is hypothesized that in states of chronically reduced oxygen tension of the blood, such as in SCA, the patient suffers minimal damage of the brain to the extent of impairing the psychologic functioning of the individual as measured by psychologic tests. The role of hypoxia or reduced oxygen tension in the pathophysiology of this disease is illustrated by the diagram of Diggs and Vorder Bruegge[1] shown in figure 1. Whether or not gross neurologic defects also occur would be a function of the extent and areas of nerve cells destroyed. In view of previous reports of abnormal electroencephalographic and neurologic complications in SCA, the present hypotheses seem quite reasonable and consistent with the known facts.[2]

The diagnosis of brain damage is usually made on the basis of information derived from one or more of the following three sources: case history, neurologic and laboratory procedures such as the EEG and/or psychologic tests. These sources yield information which is supplementary in that they tap different levels and areas of functioning of the organism.

The technical aspects of the psychologic tests are not published here in their entirety. Instead, each case has been summarized to indicate what deficits were present and to what extent. In order to familiarize the reader with the tests employed, a summary of the procedures is given below.

---

[*] From the Department of Pediatrics and the Division of Neurosurgery, Howard University College of Medicine and the Pediatric Service of Freedmen's Hospital, Washington, D. C.

[†] Hereafter abbreviated SCA.

Intellectual level. The Wechsler Intelligence Scale for Children yields a global measure of the child's present functioning ability in terms of an IQ.[3] This IQ is intimately related to the general well-being of the patient. Thus, emotional disorders, cultural deprivations, or brain damage can lower the obtained IQ. The intellectual level can also be estimated from the quality of their "drawings of a man."[4] This has the advantage of being a natural and nonverbal measure.

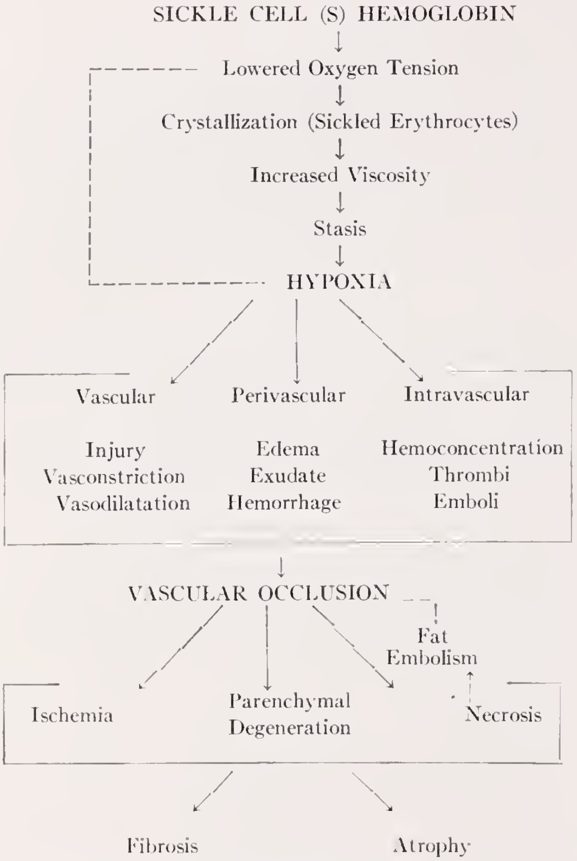

SICKLE CELL (S) HEMOGLOBIN
Lowered Oxygen Tension
Crystallization (Sickled Erythrocytes)
Increased Viscosity
Stasis
HYPOXIA
Vascular
Perivascular
Intravascular
Injury
Vasconstriction
Vasodilatation
Edema
Exudate
Hemorrhage
Hemoconcentration
Thrombi
Emboli
VASCULAR OCCLUSION
Fat
Embolism
Ischemia
Parenchymal
Degeneration
Necrosis
Fibrosis
Atrophy

FIG. 1. Graphic representation of the pathophysiology of sickle cell anemia. Adapted from Diggs and Vorder Bruegge.[1]

Unevenness of performance in different areas. This refers to the discrepancy between subtest scores within an intelligence test. Thus, a relatively high vocabulary and low block design or similar subtest scores would suggest organic impairment. The rationale here is that all subtest scores should be at the same approximate level. All deviations must be accounted for, usually in terms of impairment of functioning.

Concentration. This is measured partially by picture completion, digit symbol and digits repeated forward and backward. The discrepancy in the latter is very large in cases with brain damage.

Capacity to make abstractions. In this battery the patient's ability to make abstractions is measured by the Goldstein-Scheerer cube and color form tests.[5] In the cube test the patient reproduces a multicolored design by 4 similarly multicolored blocks. In the color form test the patient sorts 12 geometrical pieces of plastic by either shape or color and on request shifts the basis for such a sorting from form to color or vice versa, depending on which criteria the patient first sorted the pieces. The degree of facility with which such tasks are performed is a direct measure of the patient's capacity to form abstractions. Brain-damaged patients usually show severe impairments in this capacity. Abstractions are also measured by the similarities and block design subtests of the Wechsler intelligence scale for children.

Coördination of visual perceptions with motor responses. This is measured by the Bender-Gestalt tests in our battery.[6] This test consists of a series of geometrical designs presented on a 3 by 5 card with the instructions to copy. Failures and distortions occur as a complex function of perception and visual motor coördination. Brain-damaged patients usually fail to reproduce these figures accurately. The well-known limitations of the brain-damaged patient in perceptual differentiation of figure and ground are involved in these failures.

Retention for visual designs. A related function to the above, but one more intimately associated with memory, is measured by the memory for designs tests.[7] Here, the patient must reproduce 15 geometrical figures presented on 3 by 5 cards for a 5-second exposure. The use of memory makes this test a very sensitive one to minimal cerebral damage.

Each of the following 6 patients was rated on a 3-point scale on the basis of the deficits they show on the tests, thus:

Severely impaired—many deficits clearly associated with brain damage

Moderately impaired—deficits present but of a borderline nature with respect to brain damage

Free from impairment—minimal deficits which are not clearly associated with brain damage.

The first 4 patients belong in group I, i.e., the SCA patients; the second group consists of the controls, i.e., the sickle cell trait patients. The essential difference in these groups is the mild clinical involvement in the trait cases with the lack of severe anemia and subsequent hypoxia.

REPORT OF CASES OF SICKLE CELL ANEMIA

Case 1. M. R., an 8-year-old Negro girl, was one of twins born on May 10, 1946, who weighed 5 lb., 6¼ oz. She was admitted to the hospital on November 12, 1948 with a diagnosis of pneumonia. She had a temperature of 103°F and was complaining of pain in the abdomen and lassitude of 10 days' duration. Pallor of the mucous membranes, generalized lymphadenopathy, a soft systolic murmur over the precordium, and a liver palpable 2 fingerbreadths below the right costal margin were noted. The red blood cell count was 1,400,000, the hemoglobin was 5.5 grams, and tests for sickling were positive. Electrophoretic analysis showed the S-S type of abnormal hemoglobin.* A diagnosis of SCA with crisis was made, and the child received 3 transfusions during this hospitalization.

Since that time she has been admitted to the hospital 19 times for treatment of SCA crises. Her red blood cell count averaged 1.9 to 2.6 million and her hemoglobin 5 to 8 grams prior to transfusion.

Although the neurologic examination was completely negative, the EEG was interpreted as being abnormal. Its pattern was irregular with frequent high and moderate voltage. Biphasic sharp waves and spikes appeared predominately from the occipital leads on both sides.

Psychologic tests. This girl functioned at a dull normal level with an IQ of 86. There was a marked discrepancy between verbal and performance subtests in favor of the latter, indicating a failure to develop verbal capacities commensurate with motor skills. "Draw a man" test was lower than the IQ obtained and suggested in addition an immaturity of self-control. Abstractions were severely impaired as was the visual motor coördination and the retention of visual designs. This evaluation indicated severe impairment.

Case 2. V. M., a 10-year-old Negro girl, was diagnosed as having SCA at the age of 9 months. Her crises were frequent and were characterized by epistaxis followed by pallor, weakness, abdominal pain, lassitude and jaundice, requiring approximately 7 to 9 hospitalizations per year.

She has had 22 admissions since the age of 6 years. During this period her hemoglobin has ranged between 4 and 6 grams and the red blood cell count between 1.4 and 2.1 million. Electrophoretic analysis revealed S-S type of abnormal hemoglobin which confirmed the clinical diagnosis of SCA.

The neurologic examination was negative. The EEG was abnormal, however, in that the cortical activity was poorly organized and consisted of very rare 4–6 per sec., and rare 6–8 per sec. and 8–12 per sec. activity. A mild asymmetry was present both in amplitude and frequency which shifted easily from side to side. Hyperventilation for 5 minutes produced a moderate, irregular build-up and tended to accent the previously described asymmetry and also to localize it to the left occipital region. During the post-hyperventilation period the record quickly resumed its resting state, but the asymmetry remained marked. No paroxysmal activity was seen.

Psychologic tests. This girl was functioning at a dull normal level with an IQ of 83. This level was confirmed by the score on the "draw a man" test. The vocabulary subtest was relatively high in contrast to the relatively low block designs score. This pattern is often shown by brain-damaged patients. Capacity to form abstractions was impaired moderately, as were concentration, visual motor coördination, and retention of visual designs. The general impression was one of severe impairment.

Case 3. J. W., a 9-year-old Negro girl, has been known to our hospital since July 6, 1951, when she was admitted with a 5-day history of listlessness, drowsiness, fever and migratory pains of the knees, shoulders and elbows. Physical examination revealed an acutely ill child with a productive cough, jaundice of the sclerae, and pain in the right upper quadrant. The pain was exaggerated on cough and respiration.

---

* A hematologic diagnosis of sickle cell anemia of the usual variety is reserved for those patients in whom the genes responsible for sickling are homozygous (S-S). The erythrocytes in sickle cell anemia contain 75 to 100 per cent abnormal "S" hemoglobin and 0 to 25 per cent "F" hemoglobin.

The laboratory work revealed a red blood cell count of 2.43 million, a white blood cell count of 14,500, a hemoglobin of 9 grams, a positive test for sickling, and an alkali denaturation* of 2.8 per cent. The electrophoretic pattern demonstrated an S-S type of abnormal hemoglobin.

A diagnosis of right lobar pneumonia with SCA crisis was made. The child's history of anemia dated back to the age of 6 months when she was hospitalized for severe anemia at another hospital. She has been hospitalized 5 times since 1950 because of SCA crisis. Her hemoglobin has averaged 7 grams and her red blood cell count 2.19 million. The height of her icterus index has been 40.20 units. There were no neurologic or EEG abnormalities.

Psychologic tests. This patient had an IQ of 80 (dull normal). "Draw a man" score was lower than the IQ level and suggested severe impairment in her intellectual functioning. Abstraction capacity was also severely impaired. Visual motor coördination was moderately disturbed, while the retention of visual designs was severely impaired. The impression was severe psychologic impairment.

Case 4. M. P., a 14-year-old Negro boy, was diagnosed as having SCA at the age of 5 years. His crises were severe and were usually ushered in by unrelenting pain of the extremities and back. They have resulted in 18 hospital admissions and multiple transfusions. He was treated on different occasions with ACTH and cortisone with some response.[9]

On February 13, 1952, during one of his hospitalizations this patient had an unusually severe attack of pain in the extremities with a residual inability to walk. The electroencephalogram performed at this time showed no focal or general abnormality. Muscle testing revealed weakness of the flexors, abductors and extensors of the left hip, with the quadriceps and hamstring groups being more involved. Neurologic examinations performed on two separate occasions following this episode of weakness were not remarkable. X-ray films of the pelvis and long bones taken during this episode were negative, but several months later, films of the left hip revealed aseptic necrosis of the head of the femur.

His most recent neurologic examination revealed a 2 cm. shortening of the left leg. His left shoulder was carried higher than the right, and he is left-handed. His reflexes were essentially equal bilaterally; the lower extremities were hyperactive as compared to the upper. Examination of the cranial nerves was normal. A recent EEG was normal.

This patient's red blood cell count ranged between 1.7 and 2.5 million, and the hemoglobin ranged between 4 and 8 grams. Electrophoresis of the hemoglobin demonstrated an S-S pattern.

Psychologic tests. This boy was functioning at a borderline level of intelligence with an IQ of 79. The "draw a man" score was consistent with this in that it indicated a lowered level of intellectual functioning. Abstractions capacity was moderately impaired, while visual motor coördination remained intact. The retention of visual designs was borderline in quality of disturbance. The general impression here was one of mild to moderate degree of impairment.

Report of Cases of Sickle Cell Trait

Case 1. G. P., a 6-year-old Negro boy, was found to have the sickle cell trait during an evaluation prior to tonsillectomy. On November 13, 1952 he was admitted for tonsillectomy and adenoidectomy. At this time he was found to have a hemoglobin of 11 grams and 4 per cent sickling on wet preparation. His hypertrophied tonsils were removed, but because of profuse hemorrhage from the area he did not have an adenoidectomy.

Because of frequent and severe attacks of epistaxis associated with a respiratory infection, this child was readmitted less than a month after his first admission. The chief physical finding was pallor. The hemoglobin was 9.84 grams, alkali denaturation was 3.82 per cent, and there was 96.6 per cent sickling. Neurologic examination was negative, and the EEG was within the normal range. Electrophoretic analysis revealed an A-S pattern.

This child has been seen at regular monthly intervals up to the present time. During the first 12 months after his last discharge he had frequent bouts of epistaxis. Recently he has had only mild upper respiratory infections which responded to chemotherapy. His hemoglobin has ranged between 10 and 12 grams, while his red blood cell count has varied from 3.53 to 4.33 million cells.

Psychologic tests. This boy was functioning at a bright level of intelligence with an IQ of 115. The "draw a man" test was consistent with this level. Visual motor coördination was poor relative to his age. Abstractions seemed unimpaired except for a rather dramatic failure on the color form test. He was unable to shift from form to color even with help. Despite this, the general impression here was one of very mild impairment, i.e., no deficits associated with brain damage.

---

* A fraction of the hemoglobin in sickle cell anemia, "F" hemoglobin, is similar to fetal hemoglobin in that it is relatively resistant to alkali denaturation. A concentration of "F" hemoglobin greater than 1.7 per cent is diagnostically significant in individuals over 2 years of age.[8]

Case 2. A. G., a 10-year-old Negro girl, was seen in our clinic for the first time with hypertrophied tonsils and a systolic murmur heard best at the apex. The hemogram revealed a red blood cell count of 3.7 million, a hemoglobin of 9.7 grams, and 82 per cent sickling.

On subsequent clinic visits pallor of the mucous membranes and abdominal and joint pains were noted. Her red blood cell count has averaged 3.8 million, with a range of 3.4 to 4.3 million. The hemoglobin has averaged 10 grams, with a range of 8.7 to 13 grams. The alkali denaturation test was 2.7 per cent, and electrophoretic analysis revealed the A-S type of hemoglobin. Her reflexes were hyperactive but equal bilaterally. The electroencephalogram was negative. The therapy in this case has been symptomatic, and no transfusions have been given.

Psychologic tests. This girl was functioning at an average intellectual level with an IQ of 104. The "draw a man" score was lower and reflected the presence of impairing fears and inhibitions. Her capacity to form abstractions was unimpaired except for some minor failures on the cube test, which were quickly overcome. Visual motor coördination seemed to evoke difficulties, but retention of visual designs was adequate. The general impression here was one of a moderate degree of impairment.

Discussion

This study revealed psychologic deficits to be minimal in the 2 cases of sickle cell trait as compared with moderate to severe impairments in the SCA cases. The 6 children were tested by the psychologist as a group with no knowledge as to the severity of the disease in the individual cases.

Another striking finding in this small series is the fact that the 3 patients who demonstrated "severe impairment" on their psychologic evaluations were the 3 patients who had the earliest onset of the disease, i.e., 6 months, 9 months, and 24 months of age, with the average duration of the disease being about 8 years. However, the fourth patient, 14-year-old M. P., had a severe clinical course, but the onset of his clinical symptoms was not until the age of 5 years. This patient's tests showed only moderate to mild psychologic impairment.

If we parallel the severity of the disease with the degree of anemia, an arbitrary classification may be established.

Mild disease	3.5 to 4 million RBC	10 to 13 grams of Hgb
Moderate disease	2.5 to 3.5 million RBC	7 to 10 grams of Hgb
Severe disease	Less than 2.5 million RBC	Less than 7 grams Hgb

M. P., M. R. and V. M. would all be considered as having severe disease, whereas J. W. would be considered to have from moderate to severe. The controls would fall in the category of mild disease from the point of view of their anemia.

We do not know from this study how significant the degree of anemia is as compared to the age of the patient at the time of the onset of clinical symptoms. Hill et al[10] report that neurologic disturbances and clinical manifestations of crises occur without anemia. Also, it is reported by Hill's group that there is no apparent correlation between the severity of the anemia and the presence or absence of abnormal cortical function as determined by the EEG. Although 2 of our 6 cases had abnormal EEG's, our series is too small to be statistically significant.

In evaluating and arriving at the degree of psychologic deficit, we do not mean to convey the impression that SCA per se is the only factor. Other points that must be considered as contributing factors in the deficits obtained in the testing of these children of school age are as follows:

1. Their high rate of morbidity resulting in absenteeism from school for frequent clinic visits, hospitalization and convalescence at home.
2. Their general debility resulting from a chronic illness.
3. Their mental and emotional depression associated with chronic invalidism.

This psychologic evaluation of SCA patients was motivated by the nature of the milieu in which the SCA child grows and develops. One must consider the time lost from school because of the frequent hospitalizations, the inferior feeling because of the disease and its stigma, and the iatrogenic fears that develop following the discomforts of hospital procedures. The economic strain on the family and the guilt feelings on the part of the parents and their reaction to the child because the disease is genetically transmitted and is incurable should also be considered in the psychologic evaluation of the SCA patient.

Thus, it is difficult to conclude whether or not the psychologic deficits revealed in 3 of the SCA children tested were due to the degree, age of onset, and duration of the anemia or purely to extrinsic factors. Despite the limitation imposed by the small number of patients studied, we feel that this pilot study justifies future investigations along these lines.

CONCLUSION

It has been the purpose of this study to call attention to other aspects of SCA aside from the direct physical reactions and crises characteristic of this disease. An aspect worthy of further consideration is the possibility that minimal brain damage may result from the chronically low hemoglobin concentration and that such damage produces psychologic deficits which may be important in the education and guidance of the patient.

Of the 4 patients of SCA evaluated, one of them exhibited a borderline level, while 3 were unquestionably impaired in terms of the psychologic tests employed.

Children with SCA, as with those children affected by other chronic diseases, may have psychologic deviations superimposed upon their blood dyscrasia. The comprehensive care of children with SCA should include a consideration of the social, psychologic and emotional factors associated with this disease.[11, 12]

ACKNOWLEDGMENT: The authors wish to express their appreciation to Dr. Angella D. Ferguson, Research Instructor, Department of Pediatrics, Howard University School of Medicine. for her assistance in the preparation of the manuscript.

BIBLIOGRAPHY

1. DIGGS, L. W., AND VORDER BRUEGGE, C. F.: J. Nat. M. A., 1954, **46**, 46.
2. HUGHES, J. G., DIGGS, L. W., AND GILLESPIE, C. E.: J. Pediat., 1940, **17**, 166.
3. WECHSLER, D.: Wechsler Intelligence Scale for Children. New York: Psychological Corp., 1949.
4. GOODENOUGH, F. L.: Measurement of Intelligence by Drawings. Yonkers, N. Y.: World Bk. Co., 1926.
5. GOLDSTEIN, K., AND SCHEERER, M.: Abstract and Concrete Behavior: An Experimental Study with Special Tests. Psychol. Monog., 1941, no. 2, p. 53.
6. BENDER, L.: Visual Motor Gestalt Test and Its Clinical Use. Am. Orthopsychiatric A.: Research Monograph, 1938, no. 3.
7. GRAHAM, F. K., AND KENDALL, B. S.: J. Consulting Psychol., 1948, **12**, 349.
8. SINGER, K., CHERNOFF, A. I., AND SINGER, L.: Blood, 1951, **6**, 413
9. SCOTT, R. B., BANKS, L. O., JENKINS, M. E., AND CRAWFORD, R. P.: J. Pediat., 1951, **39**, 460.
10. HILL, F. S., HUGHES, J. G., AND DAVIS, B. C.. Pediatrics, 1950, **6**, 277.
11. SCOTT, R. B., FERGUSON, A. D., JENKINS, M. E., AND CLARK, H. M.: Studies in sickle cell anemia. VIII. Further observations on clinical manifestations of sickle cell anemia in children, in press.
12. SCOTT, R. B., AND KESSLER, A. D.: Sickle Cell Anemia and Your Child: Questions and answers on sickle cell anemia for parents. Washington, D. C.: Department of Pediatrics, Howard University College of Medicine 1955.

SPIGELIAN HERNIA

Report of Four Cases

NORMAN H. ISAACSON, M.D., F.A.C.S.

Clinical Instructor in Surgery, George Washington University School of Medicine

SPIGELIAN or spontaneous lateral ventral herniae occur infrequently and are even more rarely recognized clinically. Since they may assume an important consideration in the differential diagnosis of obscure abdominal tumors,[1] acute appendicitis,[2, 3] and intestinal obstruction,[4, 5, 6] instances of this herniation encountered at rare intervals merit the inclusion in the medical literature of the occasional case report. The present report adds 4 instances of Spigelian hernia to the some 170 already recorded.[4, 7]

Anatomy of the Semilunar Line of Spigel

The first reference to this structure was in 1645, in a publication of the works of Adrian Spigelius, a lecturer at the University of Padua. From this, the term Spigelian line, or semilunar line of Spigel, was derived.

Each semilunar line extends from the tip of the ninth costal cartilage to the pubic spine, as a curved tendinous line just lateral to the outer border of the rectus abdominis muscle. It is formed by the aponeurosis of the internal oblique at the point of its division to enclose the rectus muscle. Anteriorly in its whole length it is reinforced by the external oblique. Posteriorly for three-fourths of its length from above downward it is reinforced by the transversus. Midway between umbilicus and pubis the posterior sheath ends in a thin curved line, the semicircular line of Douglas. The extremities of this line or fold descend to the os pubis as aponeurotic pillars.

The linea semilunaris or line of Spigel is not a mere line. Repeated dissections and surgical observations[8, 9] have proved that the blending of the muscle layers and aponeurotic sheaths is not accomplished through a sudden sharp line of demarcation, but rather through a broad zone extending a variable distance (3 to 37 mm.) from the lateral margin of the rectus.[10] It is in this space or zone that Spigelian herniae occur (see figure 1).

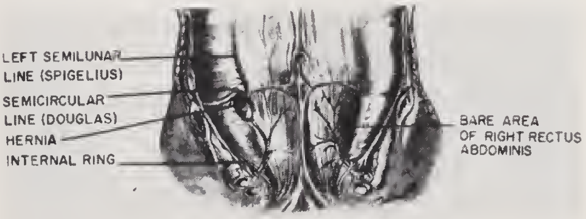

LEFT SEMILUNAR LINE (SPIGELIUS)
SEMICIRCULAR LINE (DOUGLAS)
HERNIA
INTERNAL RING
BARE AREA OF RIGHT RECTUS ABDOMINIS

FIG. 1. Dorsal view of the anterior abdominal wall showing the anatomy of Spigelian hernia and demonstrating its most common location.

Etiology and Pathogenesis

The most important etiologic factor would appear to be the existence of slitlike defects in the transversalis aponeurosis along the lateral margin of the rectus muscle. These defects are present in 45 per cent of normal subjects[8, 10] and are probably related to the lateral perforating branches of the inferior epigastric artery. General factors, such as muscle-wasting, childbearing, obesity and chronic cough, are contributory causes. Many of the recorded cases are in middle-aged, obese multipara, where small properitoneal lipomata had formed and predisposed to hernia formation by exerting traction on the underlying peritoneum.

Clinical Features

The hernial orifice may be placed anywhere along the length of the semilunar line. The most usual position is at the outer edge of the rectus muscle where the posterior sheath forms the fold of Douglas (figure 1). It is rare above the umbilicus, where the muscular and aponeurotic fibers of the transversalis and internal oblique muscles traverse at definite angles to one another. Below the umbilicus these fibers run almost parallel.

The majority of these herniae are quite small, varying from the size of a nut to that of a hen's egg, very rarely as large as an orange. The size increases with the age of the lesion, following the general law of evolution of hernia, whatever the site.

The hernial opening is usually narrow and crescentic, often thicker on the inner side. It has a rigid rim formed by the aponeurosis of the transversalis and internal oblique muscles, the edges being a sharply defined defect in the transversus aponeurosis. It may vary in size from less than 1 cm. to 8 or 10 cm. in diameter. In some cases it approaches the inguinal ring, where it lies higher and more medial than a direct hernia, which is morphologically a Spigelian hernia lying below the level of the linea semicircularis. The opening, as stated before, is rarely above the umbilicus.

In spontaneous lateral ventral herniae the sac is always formed of peritoneum and occasionally also of fibers of the transversalis fascia. It is globular, gourd- or mushroom-shaped, depending on its size; its thickness depends on the duration of the hernia. In front of the sac there is often a lipoma, which may constitute the bulk of the mass. In large herniae the peritoneum is frequently adherent about the ring and is difficult to separate on account of the thinness of the sac. In like manner, it often adheres to the external oblique. In some cases it is but a tiny peritoneal diverticulum lost in the middle of the lipoma.

Types of Hernia

After bursting through the internal oblique, the hernia becomes interstitial, deeply situated, and difficult to define. It may enlarge interparietally deep to the external oblique, the so-called "masked" hernia of MacReady. Frequently it continues to dissect laterally, appearing most prominent in the region of the anterior superior spine. Later the hernia may penetrate the external oblique and appear subcutaneously. In rare instances a portion of the hernia is subcutaneous and the remainder interstitial, or there may be 2 diverticula, 1 subcutaneous and the other properitoneal. Bilateral Spigelian herniae[11] and sliding herniae[12] in this area have been reported.

Contents of the Sac

Omentum and small bowel are most often found in the sac; cecum and sigmoid are seldom present, and colon rarely. The appendix and ovary have appeared in the sac. Irreducibility, obstruction, strangulation, and spontaneous fecal fistula have occurred.[13]

Symptoms

The symptoms of small herniae are often obscure and the diagnosis difficult. This is especially true of a hernia which does not perforate the abdominal wall. The symptoms are aggravated by pressure, coughing, and physical exertion. Nausea, vomiting, and persistent or recurring attacks of pain may mimic a variety of gastrointestinal, biliary, renal or pelvic disorders such as appendicitis, cholelithiasis, intestinal obstruction, ureteral colic and salpingitis. If the hernia if irreducible and the cough impulse is absent, it may be extremely difficult or impossible to differentiate from a tumor occurring within the abdominal wall. Accurate diagnosis may not be possible until exploratory laparotomy is performed.

Local pain usually occurs and increases with coughing or effort, decreasing when the hernia is reduced. The small hard mass is usually painful to touch before reduction. Reduction is often quite easy and may be accompanied by a gurgling sound or sensation. The finger may then penetrate the ring and confirm the diagnosis.

PHYSICAL SIGNS

Signs of small herniae are often indefinite and palpation of the swelling difficult, especially if the patient is obese. A slight fullness or bulging on the affected side may be the only sign. Sometimes the lump may be felt on profile with the patient standing. A careful examination will almost always reveal a point of localized tenderness, a sign best elicited with the patient erect, and an impulse may be felt over the painful spot.

When the hernia is large and reducible, diagnosis is simple. If it is irreducible, often the exact position of the opening can be determined only by operation. These large herniae are held at the neck by a firm ring of fascia. Beyond the confines of the constriction the hernia has a tendency to spread out in the shape of a mushroom and burrow outward between the muscle layers or beneath the subcutaneous tissues. The usual direction of greatest enlargement is downward.

Adhesion formation with irreducibility, incarceration or strangulation have been the commonest complications in these herniae. Intestinal obstruction may be the first sign of its presence.[14]

DIFFERENTIAL DIAGNOSIS

Spigelian herniae can most commonly simulate:

1. Diseases of the gastrointestinal, biliary and genitourinary tracts. Reid[2] and Sohn[3] have reported cases simulating appendicitis. Watson and Scotter[15] reported a case diagnosed only after symptoms persisted following cholecystectomy. Many instances of obscure intestinal obstruction due to the hernia are recorded in the literature.

2. Spontaneous hematoma of the rectus abdominus muscle.

3. Inflammation and tumors of the abdominal wall. Case 3 illustrates this. The preoperative diagnosis was desmoid tumor.

4. Other types of ventral hernia. Lumbar hernia appearing through either the triangle of Petit or the triangle of Grynfeltt and Lesshaft must be excluded. Lumbar hernia appears behind the posterior border of the external oblique muscle. A low Spigelian hernia can be confused with inguinal hernia, but careful examination of the inguinal canal will facilitate diagnosis. Certain forms of umbilical hernia, in which the hernial sac forms voluminous diverticula in the subcutaneous tissues, add to the diagnostic difficulties.

TREATMENT

Spigelian herniae are easily cured by operation. The sac should be isolated up to the neck, freed of fascial adhesions, the ring freely exposed, and the fat stripped away from the fascia for 1½ to 2 inches from the edge of the opening. Two transverse flaps should be fashioned, one above and one below. The sac is excised and the flaps of fascia and peritoneum overlapped for a secure suture line. No instances of recurrence of this hernia have been reported.

REPORT OF CASES

Case 1. H. C., a 47-year-old white man, was admitted to the D. C. General Hospital on November 3, 1951, complaining of a bulge in his left lower quadrant that had been increasing in size over the past 6 months. There was no nausea or vomiting, but occasional local pain was present.

Examination revealed a soft reducible swelling just lateral to the left rectus abdominus muscle and just below the umbilicus (figure 2). The mass measured 10 by 12 cm. At operation the diagnosis of Spigelian hernia was confirmed, the sac having split the external oblique aponeurosis and presented subcutaneously. Repair was accomplished by excising the redundant sac and overlapping the peritoneo-fascial layers transversely with 00 black silk.

Recovery was uneventful and there has been no recurrence to date.

Case 2. J. W., a 33-year-old white male pressman, was first seen on July 20, 1953, with pain in the right lower quadrant of 2 to 3 months' duration. The pain was intermittent and "aching" in character. He had been seen previously by 2 local physicians. One told him he had a "muscle strain" and treated him with local diathermy without relief; the other told him he had "chronic appendicitis."

On examination, when the patient stood up and strained there was a visible bulge in the right lower quadrant at the outer edge of the rectus muscle midway between umbilicus and the pubic tubercle (figure 3). This mass was not visible in the supine position and was easily reducible on pressure.

At operation on July 24, 1953 a Spigelian hernia was found to be present at the junction of the lineae semilunaris and semicircularis. The hernial orifice measured 2 cm. in its greatest diameter. The hernial sac had not perforated the external oblique aponeurosis. Repair was accomplished by excision of the sac and overlapping transverse flaps with 00 black silk.

The patient has been asymptomatic since surgery. There has been no recurrence to date.

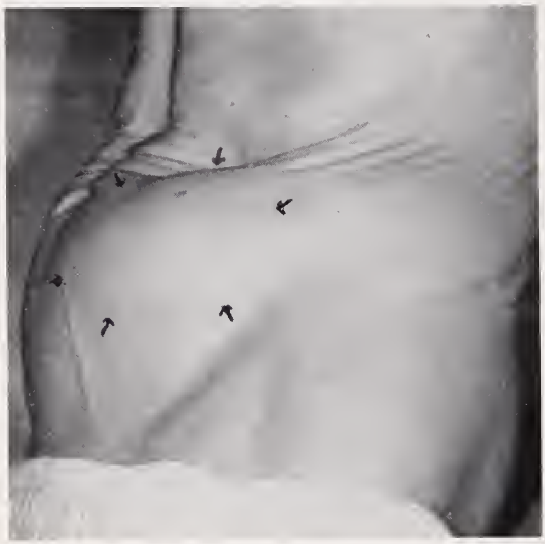


Fig. 2. Case 1. This shows the large, soft, reducible swelling in the left lower quadrant.

Case 3. R. A., a 3-year-old Negro boy, was admitted to George Washington University Hospital on August 24, 1954 with the chief complaint of a "swelling" in the abdomen of 3 weeks' duration. Three weeks prior to admission he was seen in the emergency room of the hospital, having fallen on a nail which punctured the skin of the abdominal wall in the general area of the swelling. He was given penicillin and tetanus antitoxin at that time. The swelling appeared on the following day and gradually increased in size.

On examination a firm, slightly tender mass measuring 1 cm. in its greatest diameter was noted just above and to the right of the umbilicus. The mass was not reducible. Complete physical examination was otherwise negative. A preoperative diagnosis of desmoid tumor of the rectus sheath was made.

At operation on August 25, 1954 a small hernia at the lateral border of the rectus sheath was found. The sac contained omentum which was firmly incarcerated in the hernial ring. The omentum was reduced into the abdominal cavity, the sac excised, and repair accomplished by overlapping of fascial flaps. The patient made an uneventful recovery and was discharged, August 27, 1954.

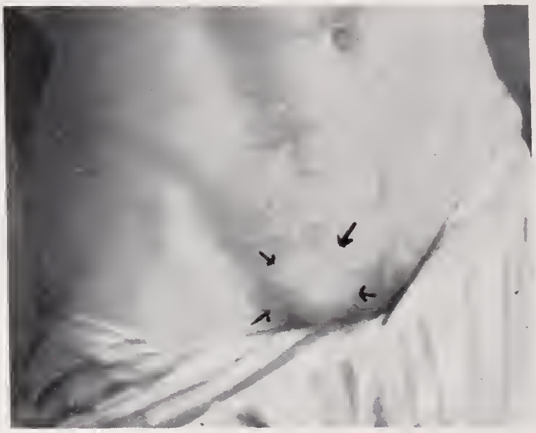


Fig. 3. Case 2. The presenting mass is in the right lower quadrant. The mass was only present when the patient stood up and strained.

Case 4. E. W., a 15-year-old white female, was seen on October 8, 1955 because of a "lump on her side" of 1 month's duration. There was associated pain in the area on lifting heavy objects or when engaged in her antics as cheerleader in a local high school.

On examination there was a tender, soft mass over the left flank, just above the iliac crest which reduced with a gurgling sound on pressure.

The patient was operated upon, October 21, with a preoperative diagnosis of "lumbar hernia." A typical Spigelian hernia was found which had dissected under the external oblique to appear in the area described. The patient made an uneventful recovery and was discharged on October 27, 1955.

SUMMARY

Spigelian herniae occur at the lateral border of the rectus muscle along the semilunar line. The anatomy of this line and the etiology, signs and symptoms of these herniae have been discussed. Four new cases of this condition have been added to the literature.

(*Continued on page 58*)

ALLERGY TO INSECT STINGS

Illustrative Case Report

HALLA BROWN, M.D.

Associate in Medicine, George Washington University School of Medicine

DEATH from a single insect sting has been described sporadically throughout recorded history. In the 27th century B.C., Menes, son of Sargon the Great, while exploring Erin was stung by a hornet and died almost immediately. In the 18th, and particularly in the 19th century, there are many accounts of sudden death from a single bee, wasp, or hornet sting.[1] In recent years more and more reports of death from anaphylaxis have been published. In 1949 alone the Public Health reports from the state of Texas list 7 deaths from insect stings. That same year a single physician[2] in Texas treated 13 constitutional reactions to insect stings in his office, and many more must have occurred unreported.

Because Washington is a city with many gardens, numerous near-fatalities have occurred here. Examples of such cases are a policeman on his beat, a home-owner clipping his hedge, a gas-station attendant, a boy gathering apples from the ground. As this paper was being written the local newspapers printed the case of a ballerina at the Carter Barron amphitheater, who while dancing was stung by a wasp, and became unconscious, requiring the use of epinephrine and hospitalization.

REPORT OF CASE

R. T., a 9-year-old boy, was first seen in July, 1953. His mother said that while barefoot 3 weeks previously he had been stung on the sole of the right foot by a honey-bee. He immediately felt weak and within 2 minutes his skin became diffusely red, he broke out in welts from head to toe, and his entire body looked swollen. He complained of being unable to breathe and of being about to faint. He was rushed to a hospital where asthmatic breathing and a state of shock were described. The administration of epinephrine and an antihistaminic produced quick relief of the generalized symptoms, but the foot remained swollen 3 times its normal size for 3 days.

The child had had 2 known previous stings. The first in 1952 had caused his entire foot to swell and throb for 2 days; the second in 1953, about a month before the acute episode, although supposedly from a honey-bee, caused no local or generalized reaction.

The boy had an asthmatic family history on both sides but none in his immediate family (parents, siblings, or the patient). The past history revealed that following his tetanus-pertussis-diphtheria immunizations he had had huge local reactions with fever lasting several days. Vaccination for smallpox reportedly had caused fever for several weeks.

Physical examination revealed a small, hyperkinetic child without physical abnormality of any sort. The site of the last sting could not be seen.

The insect which stung the boy was identified by entomologists as a honey-bee.

Treatment is divided into two parts: immunization and prevention of stings. Initial immunization in this case was accomplished with little difficulty. The details of the immunization will be published elsewhere. The mother was advised to bring the child back for maintenance immunization once every month. The child was instructed to avoid bees while being immunized, to wear shoes, and to practice removing insects immediately when stung. He was shown how to scratch out the venom sac and stinger in the direction from which it penetrated, and not to grab the venom sac. Doing this forces in more venom. The mother was advised to discard her equipment for the injection of epinephrine, which she carried everywhere with her. The patient and his mother were carefully told how to use Nephenalin, holding the tablet under the tongue 5 minutes by the clock to absorb the Isuprel coating, and then to swallow the remainder for the longer lasting effect of the ephedrine. This can be practised with small hard candies or decorettes. In case of an insect sting before the completion of immunization, the patient was advised to take liquid antihistaminic immediately and to place a Nephenalin tablet under his tongue.

The patient was stung on the ear in the autumn of 1953 by a honey-bee. He had a large local but no systemic reaction. Since he had failed to reappear for monthly maintenance injections during the winter, he was immunized again in the spring of 1954. In June he was stung on the foot by a honey-bee with only a large local reaction. In July he was stung by a "yellow-and-black striped" insect at camp without any type of abnormal reaction.

Discussion

It is important to distinguish between 2 different reactions that can be caused by bee stings. Venom contains a toxin which causes a local swelling in all persons, normal and allergic. A normal person may die from the toxin if stung by great numbers of bees in quick succession. Venom also contains an antigenic substance which is responsible for the allergic reaction found in occasional patients. The chemical relation of the antigen to the toxin is not definitely known. Certain persons when stung develop skin-sensitizing antibodies (reagins) for this antigenic substance. When the patient is stung again after an interval, the already formed antibody immediately combines with the antigen, thus causing an almost immediate allergic reaction—generalized urticaria, angio-edema, asthma, or anaphylaxis.

When a honey-bee stings, the stinger with the venom sac attached remains at the site of the sting. The brushed-off bee then dies. It takes a bee 2 to 3 minutes to inject the whole amount of venom through the fine stinger. Even though the bee has been brushed off, the smooth muscle in the wall of the venom sac continues to contract and force in venom. Therefore, the sooner the venom sac is scratched off, the less venom will be injected. A few seconds may make the difference between life and death.

Hornets, wasps, yellow-jackets and bumble bees, unlike the honey-bee, have nonbarbed, curved stingers. These insects do not leave their venom sac in their victims, and they may sting repeatedly if caught inside a garment, or they may fly around and return to sting again. With these insects it is important to brush the insect off as fast as possible and get away before another attack.

Allowing a bee to sting for gradually increasing intervals of time and then scratching out the venom sac is a method that has been in use for many years among apiarists who have become sensitized. This method of immunization, although successful in the less sensitive people, would be highly dangerous in exquisitely allergic individuals.

That immunization for allergy to insect stings can be successful is obvious from reports in the literature.[3-7] In this illustrative case it seems almost certain that without immunization the next sting would have resulted in a nearly fatal or fatal reaction.

The total or top dose for successful immunization is not definitely known and probably varies from individual to individual, as in pollen immunization, depending on the sensitivity of the patient, the nature of the antigen, the schedule used, and a number of other factors. In this case 2 different methods of immunization were used and different antigens during different years. Apparently both were successful, because subsequent, proven honey-bee stings caused no generalized allergic reaction. In the limited state of our knowledge no rule can be given.

How long monthly immunization should be maintained is another unsettled question. Many workers in the field consider 2 to 3 years mandatory.[7] The problem will be finally settled only when a safe and accurate method for testing immunity is found.

At the present time little is known about cross-immunity. There may be a common antigen between honey-bees, bumble-bees, and between wasps, hornets and yellow jackets, as well as a specific antigen for each. There may be certain group antigens too. Mueller and Hill[7] think that since the stinging insect is seldom identified accurately, a mixture of related insect antigens should be used. Other workers[8] believe that the culprit antigen is so highly specific that mixing it with other antigens merely dilutes the primary antigen and makes successful immunization less likely.

Recognition of persons needing immunization is gradually becoming easier. The patient usually gives a story of having been stung once or many times previously without untoward reaction. Then following a sting he develops a large local reaction lasting 2 to 6 days. Following another sting he develops anaphylaxis or some other type of generalized allergic reaction.

Prophylaxis (other than immunization) until immunization can be accomplished has been described in this case report. Epinephrine administered by nebulizer or hypodermically can be used instead of isopropyl arterenol, but for children in school the use of Nephenalin sublingually is the most practical method.

Summary

A case of anaphylaxis to honey-bee sting with successful immunization is presented. Protective measures other than immunization are discussed. These include the wearing of shoes, rapid removal of the stinger, and the use of Nephenalin or epinephrine and antihistaminics. The nature of the antigen, the development of sensitization, the duration of protection after immunization, recognition of cases needing immunization, and other aspects are briefly discussed.

BIBLIOGRAPHY

1. Gould, G. M., and Pyle, W. L.: Anomalies and Curiosities of Medicine. Philadelphia: Saunders, 1900, p. 713.
2. Swinny, B.: Severe reactions from insect stings. Texas J. Med., 1950, **46,** 639.
3. Braun, L. I. B.: Notes on desensitization of a patient hypersensitive to bee stings. South Africa M. Rec., 1925, **23,** 408.
4. Fisher, D. C: Hypersensitivity to bees successfully treated with whole bee extract; case report. J. Allergy, 1934, **5,** 519.
5. Prince, H. E., and Secrest, P. G., Jr.: Use of whole bee extract in sensitization to bees, wasps, and ants. Ibid., 1939, **10,** 379.
6. McLane, E. G.. Successful treatment of extreme allergy to bee body and bee venom. Minnesota Med., 1943, **26,** 1061.
7. Mueller, H., and Hill, L. W.: Allergic reactions to bee and wasp stings. New England J. Med., 1953, **249,** 726.
8. Loveless, M. H.: Personal communication.

President's Page

FORECAST FOR 1956

Our Society has just entered upon the 139th year of its existence. What 1956 has in store for our organization can be prophesied only in part. However, one thing is already apparent. This will be another big year in Washington where medical meetings are concerned.

The Society's Fifth Midwinter Seminar will be held, February 14, 15 and 16, 1956. As announced elsewhere in this issue of the Medical Annals, the general subject of the three night sessions will be Diseases of the Thyroid Gland. Out-of-town speakers will include Dr. George Crile, Jr., Cleveland Clinic, Cleveland, Ohio; Dr. Edgar L. Frazell, Memorial Center, New York, N. Y.; and Dr. John C. McClintock, Albany Medical College, Albany, N. Y. Without question, this will be one of the finest programs presented in connection with the Seminar. A record turnout is therefore expected.

The Society's 1956 Annual Scientific Assembly has been cancelled because it was decided to take advantage of the invitation of the Southern Medical Association to join with that organization in presenting a scientific program in connection with the Association's annual meeting to be held in Washington, November 12 to 15, 1956. The Society has accepted responsibility for the first day's program. Most of those participating will be District physicians, which will afford the local medical profession a gratifying opportunity to demonstrate that Washington is truly a medical center of first magnitude. Dr. Ralph M. Caulk, who will then be President of the Society, has appointed Dr. Marcel J. Foret as Chairman of the local Committee on Arrangements.

Other medical meetings scheduled to be held in Washington this year are the annual sessions of the American Academy of General Practice, March 19 to 22, and the Association of Military Surgeons of the United States, November 11 to 14.

I would be less than candid if I did not admit my disappointment that the National Health Fair will not be held during my term of office. However, I am aware that the decision to postpone it for a year was a wise one. The important thing is that this ambitious health educational effort measure up to the highest possible standards and reflect great credit on its sponsors.

Of course, the vitally important committee activities will continue. Some of these may culminate in general meetings of the Society. Where this occurs it is my hope that the attendance will measure up to the importance of the subjects under discussion.

W. Ross Morris

Editorials

LOOKING AHEAD—1956

Unaccustomed as I am to dealing with ponderables in the field of health, and particularly public health, I shall attempt to forecast some of the prospects for the improvement of the health of the public in the Nation's Capital in the ensuing year.

It has long been an axiom that "public health is purchasable." As Dr. Biggs, the eminent public health authority, concluded, "Within natural limitations a community can determine its own death rate." The services purchased and the efforts expended in public health are often taken for granted—the control of communicable diseases; environmental health services; diagnostic, analytical and other laboratory procedures necessary for early and accurate diagnosis of communicable diseases; and the providing of information for the improvement of living conditions to assure freedom from man-made or other preventable situations which cause ill health or death.

Within the past 25 years, there has been a tremendous improvement in the health of our citizens, which, in turn, means an improvement in public health. Medical research, scientific developments, improved media of information have brought about rapid changes. Who in 1955 has not heard of the Salk polio vaccine, for example? Yet, when immunization technics against other communicable diseases were discovered, years passed before anything like 25,000,000 children were inoculated.

In 1956 we can foresee other important, exciting developments in the field of public health and medicine. We can look forward to a continuing effort by those devoted, dedicated workers in the numerous health, medical and allied professions toward a solution to many of our significant health problems.

There are still killers and cripplers to be conquered. Heart disease, and its complications, is the Number One Killer. Cancer remains the Number Two Killer. More than half of the resident deaths to Washingtonians are caused by these two diseases. While tuberculosis has dropped to eighth in the list of the Ten Major Causes of Death in the District of Columbia, it is still not conquered. It remains a threat in this community, and our concerted efforts are still needed to assure that there is no increase.

Changing times necessitate a change in our attitude toward care of the chronically ill. We are now faced with treating the acute phase of diseases within that category, but, equally important, we should strive for the rehabilitation of individuals involved so they may continue as independent, self-sustaining members of the community for many more years. To this end the Vocational Rehabilitation Workshop, to be opened in January at the D. C. General Hospital jointly by the D. C. Office of Vocational Rehabilitation and the Department of Public Health, represents the first step in returning to gainful employment many persons who until recently were considered unemployable. Similarly, the Cardiac Evaluation Unit at the Polk Health Clinic, again a coöperative venture of the Department of Public Health, Office of Vocational Rehabilitation, and the Department of Public Welfare, should produce tangible results

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.

in 1956, and may in a measure reduce some of the tax burden now required for public assistance.

There are indications of an increasing prevalence of mental disorders. The fact that our Child Guidance Clinics in the Department of Public Health, as well as the two voluntary clinics, established through parent-teacher groups, schools, and interested psychiatrists, have long waiting lists points toward the need for increasing attention to mental health. Definite action in fulfilling the needs for care of the acute phases of mental disorders will be accomplished with the start of the new Psychiatric Building at D. C. General. The preventive aspects, the early behavioral problems, still remain a crucial obstacle which will require attention in 1956.

These are some of the objectives for 1956. They can be met, but only with the concerted efforts and coöperation of all individuals and groups interested in the health of our citizens.

THE HONORABLE ROBERT E. MCLAUGHLIN
Commissioner of the District of Columbia

FOREIGN RESIDENTS AND INTERNS

With the exception of University hospitals and those with medical school affiliations, almost every one of the 6,000 plus institutions in the United States is showered with applications for internships or residencies, a large majority from foreign countries, and the number is increasing each year. The explanation is easy, but the immediate solution of the problem is not apparent.

There are not nearly enough graduates from the American medical schools to fill the vacancies that recur each year in the hospitals. Adequate care of the patients requires more physicians on the house staff, more technicians, and more nurses than ever before; not that the patients are more ill, but we have found better methods of diagnosing and treating diseases. Not too many years ago only a few laboratory tests were requested in contrast to the multiplicity of present-day requirements. Hypodermic medication consisted of the administration of a few drugs—morphine, digitalis derivatives, possibly strychnine and atropine. Today the patient receives most of his medication and some of his food by the way of a needle. The history and physical examinations and progress notes are better and more elaborate, because there is more to investigate about the patient's past and present history.

All along the line there has been an increasing ratio between personnel and patient. To supply the needed interns and residents, the hospitals have accepted graduates from foreign schools, not through a matter of choice but one of necessity. On the whole they have filled a gap in professional service, but it falls short of an ideal situation. They come from almost every country on the globe, except from behind the Iron Curtain, and naturally present difficulties in integration with American medical standards. Language alone is an impediment that cannot be quickly overcome. Some have ability to converse in English, but lack familiarity with technical terms. Others make themselves understood with difficulty and do not comprehend our common expressions; consequently the histories and notes concerning the patient require translation or adaptation. It is almost impossible to read some histories with a passive face. Our foreign contingent, it should be said, is anxious to learn; their conduct is above reproach, and their intentions are the best. Many lack the Yankee push and alertness, which is understandable. A few are exceptionally intelligent and very ambitious.

Most foreign applicants are attracted by hospitals that are accredited for residencies requiring three or four years of training. The

Fifth Midwinter Seminar

OF

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

February 14, 15 and 16, 1956

MEDICAL SOCIETY BUILDING 1718 M Street, N.W.

Dr. Frazell

Dr. Crile

Dr. McClintock

CAT.

CAT.

CAT.

DISEASES OF THE THYROID GLAND

TUESDAY EVENING, FEBRUARY 14, 8 P.M.

W. Ross Morris, M.D., *Presiding*

President, The Medical Society of the District of Columbia

INDICATIONS FOR THE USE OF I^{131}

E. Richard King, M.D.

Captain (MC), U. S. Navy; Head of the Radioisotope Laboratory, U. S. Naval Hospital, Bethesda, Maryland

THE DIAGNOSIS OF THYROTOXICOSIS

Joseph E. Rall, M.D.

Chief of the Clinical Endocrinology Branch of the Arthritis Metabolism Institute, National Institutes of Health, Bethesda, Maryland

MEDICAL MANAGEMENT OF THYROTOXICOSIS

Laurence H. Kyle, M.D.

Associate Professor of Medicine, Georgetown University School of Medicine, Washington, D. C.

ACCEPTABLE MORBIDITY IN THYROID SURGERY

Ernest A. Gould, M.D.

Senior Attending Surgeon, Garfield Memorial Hospital, and Clinical Instructor in Surgery, George Washington University School of Medicine, Washington, D.C.

DISCUSSION PERIOD

WEDNESDAY EVENING, FEBRUARY 15, 8 P.M.

Wallace M. Yater, M.D., *Presiding*

Chairman, Executive Board, The Medical Society of the District of Columbia

THYROID DISEASE IN PEDIATRICS

John C. McClintock, M.D.
Assistant Clinical Professor of Surgery, Albany Medical College, Albany, New York

THYROID DISEASES IN OBSTETRICS AND GYNECOLOGY

Lawrence A. Rapee, M.D.
Attending Physician, Garfield Memorial Hospital, Washington, D.C.

THE DIAGNOSIS OF THYROIDITIS

Gustavus H. Klinck, M.D.
Pathologist, Armed Forces Institute of Pathology, Washington, D.C.

THE TREATMENT OF THYROIDITIS

Brooks G. Brown, M.D.
Attending Surgeon, Garfield Memorial Hospital, and Clinical Instructor in Surgery, George Washington University School of Medicine, Washington, D.C.

THURSDAY EVENING, FEBRUARY 16, 8 P.M.

PANEL DISCUSSION ON THE DIAGNOSIS AND TREATMENT OF NODULAR GOITER AND THYROID CANCER

Theodore Winship, M.D., *Moderator*

Senior Attending Pathologist, Garfield Memorial Hospital, Washington, D. C.

George Crile, Jr., M.D.
Department of Surgery, Cleveland Clinic, Cleveland, Ohio

Edgar L. Frazell, M.D.
Associate Attending Surgeon, Head and Neck Service, Memorial Center, New York, New York

Calvin T. Klopp, M.D.
Assistant Clinical Professor of Surgery, George Washington University School of Medicine, Washington, D.C.

John C. McClintock, M.D.
Assistant Clinical Professor of Surgery, Albany Medical College, Albany, New York

Plan to attend the

SOCIAL HOUR

THURSDAY EVENING, FEBRUARY 16, 1956

Following the Scientific Program

REFRESHMENTS

This will afford an excellent opportunity to get acquainted with your fellow physicians.

compensation is also a consideration. The three- or four-year course limits the number that can be accepted, as the advance toward chief resident eliminates one or two each year in most major specialties. Those seeking residencies hope to pass successfully a board examination and to return to their native soil with a diploma or certificate to adorn the wall of their offices.

The immediate direction of this trend will probably continue unless some steps are devised to slow or divert it into other channels, all of which will take time. We have heard much of the good neighbor policy of the United States, but it seems to content itself with improving the industrial and agricultural interests of our neighbors, with minor attention to the cultural side. The medical aspects have not been fully explored, except for research in tropical and communicable diseases, and they offer an opportunity for neighborly interest. Would it not be possible, through diplomatic negotiations, to send medical groups to these various countries, without expense to anyone but our own Government, to coördinate medical teaching?

We could very well have an exchange of teachers, since there are many brilliant medical men outside of our boundaries who would be happy to visit America in the capacity of a teacher.

A few Washingtonians have visited the West Indies and Central America to give brief courses or lectures in their specialties, and without exception they have been graciously and enthusiastically received, and, in several instances, requested to return. It is something to think about and, better still, to do about.

Charles S. White, M.D.

IMPORTANT CHANGES IN REPORTING BIRTHS AND DEATHS

New live birth, death and stillbirth certificates are being put into use in the District of Columbia. These embody changes recommended by national and international agencies interested in these certificates and these changes are described elsewhere.[1]

The medical supplement to the birth certificate has been completely revised and simplified in order to include only those items which are of current or continuing interest in maternal, fetal, and neonatal health and in order to facilitate reporting by the physician. If the data reported on this supplement are to be of any value, however, it is essential that all items be completed and that the information recorded be accurate. This was not true of the reporting on the previous medical supplement. Incompleteness and inaccuracy of reporting were conspicuous deficiencies.[2]

This subject is of sufficient importance to have received editorial comment in a recent issue of the J. A. M. A.[3] The editorial calls attention to the respective responsibilities of the reporting physician and the recipient agency. The Department of Public Health now has facilities and services to process the data in the medical supplement on a continuing basis and to publish and distribute periodic reports. It remains for the practicing physician to complete all items on the medical supplement and to record accurate information. Given this coöperation, we can look forward to information of value in maternal, fetal, and neonatal hygiene, both for the practicing physician and the Department of Public Health.

Ella Oppenheimer, M.D.
Chief, Bureau of Maternal and Child Health, District of Columbia Department of Public Health

---

[1] *The Capital's Health*, December, 1955; reprinted in this issue of Medical Annals, p. 46.

[2] Oppenheimer, E.: Am. J. Pub. Health, 1955, **45**, 1121.

[3] Editorial: J.A.M.A., 1955, **159**, 1215.

POLIO AHEAD: THE REASONS BEHIND THE 1956 MARCH OF DIMES

The Salk vaccine is a major weapon against paralytic poliomyelitis, but it has not yet won the war against this disease. The District of Columbia will still have polio problems in 1956.

Continuing coöperation of physicians must be had both in administering the vaccine and in caring for patients already paralyzed and who will be paralyzed in spite of the vaccine. The Salk vaccine is not 100 per cent effective, and it will take considerable time yet, perhaps years, before all of those most susceptible to paralytic poliomyelitis can be fully immunized against it.

The National Foundation for Infantile Paralysis, supported through public contributions to its January March of Dimes, has made an enviable record, both in the District of Columbia and Nation-wide, for meeting the problems posed by paralytic polio. In 1955 the March of Dimes gave 54,000 c.c. of Salk vaccine without charge to the District of Columbia to initiate its vaccination program.

The results already reported from the use of the vaccine are encouraging. There remains a great need for additional research to improve the Salk vaccine, to determine the duration of immunity it effects (and conversely to determine the need for "booster shots") and to provide the best possible treatment for patients already or yet to be involved with paralytic poliomyelitis. There is also a vast need for the professional education of young men and women who will contribute to the necessary research and help give the needed treatment.

A brief review of the record of the National Foundation for Infantile Paralysis in the District of Columbia should help to orientate physicians to the many services to patients and the professions which have been made possible by the March of Dimes since 1938, when the National Foundation was founded.

Over $1,073,812 has been spent by the District of Columbia chapter for aid to polio patients.

A total of 46 National Foundation scholarships and fellowships have been awarded to District of Columbia residents.

Much research in virology and the treatment and after-care of poliomyelitis has been conducted in the District. Toward this research the March of Dimes has granted over $324,000.

In addition, grants for professional education have totaled over $140,000.

The institutions in the District of Columbia that have had March of Dimes grants are George Washington University, Georgetown University, Catholic University, Howard University, Children's Hospital and the U. S. Public Health Service.

A total of 6 tank respirators, 3 chest respirators and 5 rocking beds were sent into the District of Columbia as emergency shipments in the first 10 months of 1955.

To pay for research, education and aid to polio patients, the March of Dimes needs $47,600,000 in 1956. District of Columbia physicians are urged to support and to advise their patients to support the 1956 March of Dimes.

HART E. VAN RIPER, M.D
Medical Director, The National Foundation for Infantile Paralysis, Inc.

In and Out of Focus

BY THE OBSERVER

The Big Issue

To leaders of organized medicine the big issue in 1956 is H.R. 7225, a bill which would amend the Social Security Act to provide for cash disability benefits. It has far overshadowed the medical profession's concern over the probable inclusion of doctors under the Social Security System on a compulsory basis. For the AMA is convinced that the enactment of this legislation can only lead to "a full-fledged system of Government health insurance."

What aroused the AMA were the conditions under which the House passed H.R. 7225 near the end of the last Congressional session. Rushed through the House Ways and Means Committee without public hearing, the bill passed by a vote of 372 to 31 under a suspension of the rules which barred amendments and limited debate to 40 minutes.

The Senate Finance Committee refused to take hasty action on a bill of such major importance. Mrs. Oveta Culp Hobby, then Secretary of the Department of Health, Education and Welfare, raised doubts which the Committee believed warranted extensive public hearings during the second session of the 84th Congress.

The AMA is well aware that this legislation is politically attractive to politicians with an eye on 1956 elections, for it would not only provide cash disability benefits but it would lower the Social Security retirement age for women from 65 to 62, extend monthly benefits for permanently and totally disabled children beyond the age of 18, expand compulsory Social Security coverage to all self-employed persons except (at the moment) physicians, and raise Social Security taxes over and above increases already scheduled for the next 20 years.

The most controversial feature of the bill, as the AMA sees it, is the one which would make permanently and totally disabled persons eligible to receive their Social Security retirement benefits at the age of 50 instead of 65. It is this section which it insists is of particular concern to the medical profession.

Among the questions raised by this provision are: What are the facts in regard to permanent total disability? Won't this proposal duplicate or overlap existing programs of assistance and rehabilitation? What effect will cash disability handouts have on the patients' incentive to rehabilitation? Won't this extend Federal control over physicians? How will this affect the future of medical practice? Will this lead step by step to the lowering and eventual elimination of the age 50 eligibility requirement, then cash benefits for dependents of those who are permanently and totally disabled, then a temporary disability benefits program, then cash benefits or direct Government payments for hospital medical costs?

Emphasized, too, are the staggering costs which would follow the enactment of this legislation. The AMA points out that the Social Security System has now reached a point where any further changes may have a profound influence on the Nation's economic, social and political future. It strongly urges that the Social Security issue be taken out of the area of vote-catching politics, that there be an objective, thorough study of the System in all its present and future aspects, and that the facts and realities emerging from such a study be used as a basis for a sound national decision on this vital issue.

No one can doubt the emotional pull of the proposed amendments. Whether or not this becomes a deciding factor remains to be seen, but there are other uncertainties. What position will the Administration take? The key figure here is Marion B. Folsom, Secretary of the Department of Health, Education and Welfare. His views have so far been encouraging to medical leaders. What will he do when the chips are down?

An article, entitled "He Sparked a Revolution," by Joseph Alsop, which appeared in *The Saturday Evening Post* for December 3, 1955 provides some food for speculation. Folsom, Mr. Alsop points out, drafted the first national old age insurance bill back in 1934. This was the forerunner of the Social Security System. He describes the Secretary as an exponent of a "new brand of American conservatism" which takes the position that Social Security is here to stay and that the business community had better learn to live with it. This appraisal may mean little; time alone will tell.

It would appear that *New York Medicine* is correct when it states that the "AMA and the medical profession is in for one of its major battles." "Fortunately," the publication continues, "the medical profession will not be alone in its fight. The insurance industry, the U. S. Chamber of Commerce, the National Association of Manufacturers, and many other conservative organizations will also oppose the bill."

★

Social Security and the Doctor

The AMA has consistently opposed the inclusion of physicians on a compulsory basis. under the Old Age and Survivors Insurance provisions of the Social Security Act. (The Association has recently stated it is not opposed to an amendment permitting voluntary participation.) Not all physicians have agreed with its stand; how many, no one is certain, but indications are that it is a sizable number.

Polls have been taken by a few county medical societies with varying results. None of them have been conclusive enough to warrant drawing conclusions. However, they have suggested the desirability of a referendum.

The AMA's House of Delegates took cognizance of this at its recent meeting in Boston when it adopted a resolution recommending to state medical societies that they poll their memberships on this question and that the results of the polls be transmitted to the Association's Board of Trustees as soon as possible.

At its meeting on December 12, 1955, the Society's Executive Board authorized a poll of District physicians. Before these comments appear, members of our organization will have had an opportunity to express their views on the subject.

Many physicians—how many, of course, remains to be seen—want no part of OASI benefits. They see in the inclusion of doctors further encouragement to proponents of the welfare state. They argue that the present Social Security Act, even if it is not broadened, is unsound economically and can only lead to an intolerable tax burden for future generations. They insist that OASI is not insurance but taxation and should be presented to the people as such. Dependence upon the Government for subsistence by those who prefer the dole to employment, they say, certainly will be encouraged. They strongly favor the so-called Jenkins-Keogh Bills which would permit the self-employed to defer payment of taxes on a certain portion of their incomes annually, which would then be set aside for a rainy day.

Equally vigorous in their stand are those who argue that the Social Security System is here to stay and that opposition of the medical profession doesn't make sense; that in these circumstances physicians cannot justify being the only group among the self-employed opposed to participation on a compulsory basis; that doctors who are of the age group now eligible and who are in need financially should enjoy the benefits of OASI; and that it is unlikely there will be as many abuses as the opponents of the proposed amendments claim. Few people with earning capacity at retirement age, they insist, will take advantage of OASI benefits if a $1,200 income excludes them. Arguments for the Jenkins-Keogh Bills which they favor have nothing directly to do with this issue.

These and many other arguments will undoubtedly be advanced in the coming weeks. Like many others, your Observer suspects that the AMA's position will be sustained by its members; however, one can never be certain.

★

Guides—Not Standards

The wide publicity now being given medical society grievance committees has created the impression in some quarters that they are something new. Of course, this is not so. Your Observer recalls that in the early 1930's the county medical society with which he was associated had such a committee conducted very much like those of the present day. If he remembers correctly, there were a number of other societies which had similar committees. Current public and professional interest in these committees has been largely stimulated by the AMA as an answer to the mounting criticism of the medical profession. The net result has been a substantial increase in the number of grievance committees, there being at present some 700 in operation.

Considering the fact that many committees were established under pressure, it is not surprising that they have not been uniformly effective. Reports of the inadequacies of a number of them were sufficiently disturbing to officials of a few state medical societies to warrant bringing the matter to the attention of the AMA's House of Delegates. Resolutions were introduced by delegates from Colorado and Mississippi at the December 1954 meeting of the House, calling upon the Association's Board of Trustees to appoint a special committee to set up standards of operations for grievance committees. The resolutions were adopted, and shortly thereafter a committee known as the Committee to Recommend Standards for Grievance or Mediation Committees* was appointed. The activities of the Committee hold special interest for District physicians because one of its members is Dr. Frank D. Costenbader, former Chairman of the Society's Grievance Committee.

One of the Committee's earliest decisions was that it would prepare guides rather than standards for the organization and conduct of grievance committees. Following several months of intensive work, the Committee submitted a report to the AMA's Board of Trustees, which in turn presented it to the House at the Boston meeting. The report contains these guides:

> "The purposes of grievance committees," the Committee states, "are to prevent or resolve misunderstandings, to clarify and adjust differences between physician and patient, and to assist in maintaining the high levels of professional deportment. . . ." These committees "should be empowered by constituent [state] associations with authority to receive complaints, to investigate, mediate, arbitrate, and, where necessary, refer them to appropriate bodies for adjudication."
>
> "Grievance Committee," it was agreed, was the most realistic title and the one best understood by the public and the profession. It has been adopted by some 20 state associations. A few use such titles as Board of Supervisors, Mediation Committee, and several others. "Any unfortunate disguising of a grievance committee's true purpose by the use of inappropriate titles or by ascribing to it a multiplicity of functions, negates realization of valuable benefits to the profession and the public alike."
>
> To insure permanence and appropriate authority for a grievance committee, provisions should be made in the constitution or by-laws of the constituent association for the creation, maintenance, and authority of the committee.
>
> Members of a grievance committee should be chosen because of their "willingness to perform delicate and sometimes odious tasks as a member of an impartial team." They should have had "experience in the affairs of medical organization" and "judicial temperament."
>
> Authority must be given "to compel the response (either in writing or by personal appearance) of any member of

---

* The Committee was composed of Drs. J. P. Culpepper, Jr., Mississippi, *Chairman*; George A. Unfug, Colorado; Keith Frankhauser, Illinois; Cleon A. Nafe, Indiana; and Frank D. Costenbader, Washington, D. C. Serving in an advisory capacity were Messrs. Rowland B. Kennedy, Executive Secretary of the Mississippi State Medical Association; Harvey T. Sethman, Executive Secretary of the Colorado State Medical Society; and John E. Farrell, Executive Secretary of the Rhode Island Medical Society.

the medical organization," and "to initiate investigations on the committee's own motion." Also authority should be given "to file charges in the name of the committee before an appropriate judicial body of the medical organization."

Specific privileges should be guaranteed equally to complainant and complainee. These are listed as follows:

"1. To appear in person before the committee.

2. To present witnesses or evidence in substantiation of the complaint or the reply.

3. To have prompt notification of the decision of the committee.

4. To appeal the decision to the appropriate superior body."

It should be emphasized that the physician summoned before a grievance committee is *not on trial*. These committees may recommend disciplinary action but never act as a trial body.

The existence of a grievance committee should be continuously publicized because it is a service of the medical organization to the public. "This service cannot succeed unless the public knows of its existence and understands how to use it."

Grievance committees should proceed only with the advice and assistance of competent legal counsel.

Reports "without identification," it is recommended, should be made regularly to the governing body of the state medical association.

There were, of course, other "guides" recommended but your Observer considered these of most interest to his readers. The Committee's complete report will soon be published in brochure form and given wide distribution.

★

More Light on the Malpractice Situation

For many months now the AMA's Law Department, in coöperation with the Association's Council on Medical Service and Committee on Medicolegal Problems, has been engaged in a survey of professional disability insurance and claims prevention programs. While the study is still incomplete, facts gleaned from the interim report submitted to the AMA's Board of Trustees and the House of Delegates at the Boston meeting are enlightening if not conclusive.

The Department's findings are based on information obtained from state medical societies and personal visits to a number of these organizations by its investigators. Most of the data were obtained by means of an "exhaustive questionnaire," the purpose of which was to ascertain the "(a) insurance carriers, and the amounts and types of professional liability insurance coverage available, . . .; (b) experience, if any, or views concerning group coverage; (c) the incidence, the most common causes and the results of professional liability claims; (d) the existence, types, methods of operations and the success of claims prevention programs; and (e) statistical data relative to the number and disposition of claims and suits, professional liability insurance experience and rate changes during the past ten years."

Highlights of the report, based largely on this questionnaire, which your Observer thought would be of particular interest to readers of this column follow:

Of 30 state medical societies replying, 6, California, Georgia, New York, Oregon, Rhode Island and Washington, "indicated that they offer group professional liability insurance or have at some time sponsored or endorsed such insurance on a state or county basis." (The District of Columbia is not included because its data had not been supplied by the Society in time to be included in the report.) Eighteen have committees on a state or county basis that review claims brought against members.

Most common "causes" of liability claims were listed as follows:

(a) X-ray burns
(b) Foreign body left in patient following surgery
(c) Imperfect result following orthopedic surgery
(d) Failure to obtain consent prior to surgery
(e) Inaccurate prescription of drugs or improper diagnosis
(f) Criticism of one physician by another
(g) Excessive fees
(h) Poor physician-patient relationship

One state reported that 90 per cent of claims in its jurisdiction had some justification, whereas another expressed the view that only 30 per cent of its claims had merit.

The effect of claims on the reputation and practice of the physician involved, the majority thought, was slight. Adverse effects were observed largely in the smaller communities.

All states reported that professional liability insurance was readily available. Forty-five companies, foreign and domestic, were listed as providing professional liability insurance coverage.

Very few states have claims prevention programs. Those that do, sponsor lectures for physicians prior to their admission to the medical society, and periodically thereafter for the entire membership. Some publish pertinent articles and other literature on the subject in the medical journals.

As stated above, the Department has not yet completed its investigation. Contemplated is a study of professional liability experience in other countries; a canvass of a "significant number of physicians throughout the United States" for information about their experiences and for their opinions; a survey of attorneys for their experiences, opinions and attitudes; a survey of the judiciary for the purpose of "obtaining an insight into the thinking of judges who sit in judgment, of physicians in malpractice cases"; an analysis of state statutes and reported cases for the past 20 years, as well as a study of the comparable field of negligence actions; and, finally, a study of insurance companies' experience and rates.

While these investigations are in progress, the Department with the Committee on Medicolegal Problems will publish in *The Journal of the AMA* a series of articles which will later become a part of the survey.

One cannot but admire the courage and the industry of Mr. C. Joseph Stetler, Director of the Department, who is largely responsible for the planning and implementation of the survey. When completed it should provide a basis on which to develop a sound, forward-looking program which will result in much needed improvement in the malpractice situation.

National Health Fair (continued)

Plans for the National Health Fair have gone forward somewhat more slowly than was anticipated. Largely responsible has been the fact that as plans for the Fair unfolded it has become evident that the project was far more ambitious than it appeared in the beginning. Then, too, more time was required to obtain needed funds if they were to be available in advance of incurring financial obligations. The position of the Finance Committee has been that no definite commitments should be made until the required funds were on hand.

In view of these developments, the Fair's Executive Committee held a meeting December 2, 1955 to consider whether it would be possible to put on the Fair in the spring of 1956 as originally planned. Its unanimous decision was to postpone it for one year. Tentatively agreed upon as the most suitable place for the Fair was the National Guard Armory. Upon instruction of the Committee, the management of the Armory was contacted and the Fair booked for 10 days beginning April 26, 1957. In the meantime, committees will proceed with their plans, taking full advantage of the additional time at their disposal.

Since the last reports on the Fair in the MEDICAL ANNALS ("In and Out of Focus," February and September, 1955 issues), the personnel of the Executive Committee has been completed. The following have accepted appointments to the Committee: Dr. J. Ross Veal, Chairman; Drs. George Maksim and Preston A. McLendon, representing the Medical Society; Dr. Oscar B. Hunter, Jr. and Joseph W. Leverenz, the Washington Board of Trade; Gerald E. Stanton and Robert D. Hoffman, the Washington Junior Chamber of Commerce; George C. Pendleton and Dr. Howard M. Payne, Health Section, United Community Services; Dr. Daniel L. Seckinger and Howard West, District of Columbia Health Department; Dr. Albert K. Leon, D. C. Dental Society; Albert J. Obert, D. C. Pharmaceutical Association; and Josephine

J. Albrecht, Secretary. A representative of the Graduate Nurses Association is to be appointed.

Except for the Technical Committee, chairmen and vice chairmen of committees have been appointed as follows: Program Committee: Dr. Alfred A. J. Den, Chairman, Dr. Peter Noble Lombard, Vice Chairman; Production Committee: Clarence A. Arata, Chairman; Public Information Committee: George R. Titus, Chairman, Gody Pfanstiehl, Vice Chairman; and Finance Committee: George B. Burrus, Chairman, Richard D. Gibbs, Vice Chairman.

The Technical Committee consists of the following: Dr. Darrell C. Crain, Chairman; Dr. Charles A. Hufnagel, Vice Chairman; Lt. Colonel L. G. Alexander, (MC) USA, James J. Culhane, George B. Griffenhagen, Dr. Jack Kleh, Captain Robert Schultz, (MC) USN, Dr. Donald Sickler, Dr. William Stovall, Herman Van Cott, and Major Louis S. Wiegele, (MC) USAF.

Director of the Fair, as stated previously, is the Secretary of the Medical Society. As soon as funds are available he will proceed with the employment of needed administrative personnel.

What has impressed those who have accepted the above assignments most is the enthusiasm shown at meetings held thus far. It has been so genuinely spontaneous that any doubts which there may have been about the success of the Fair have been dispelled.

T. W.

REPORT OF DELEGATES TO THE AMA CLINICAL SESSION*

Public Relations

The eighth Medical Public Relations Conference, now an established feature of interim AMA sessions, was held on November 28. A symposium titled "A Look at '56" combined attempts at clairvoyance about legislation with common-sense advice regarding physician-public relationships. In that latter vein, AMA President-elect Dwight Murray told the doctors that the key to public relations is the manner in which they regard the people and participate with them in neighborhood and community affairs. "No one will give a hoot in Hades about medical problems," Dr. Murray said, "if we're going to sit on our pedestals and wait for others to come to us." He lauded the physician who is a *worker*—not just a *joiner*—and warned that the profession too often thinks in lofty terms of brochures and radio-TV for contacts with the public, to the neglect of neighborly transmission of information by word of mouth.

The OASI Program.—Dr. David B. Allman, Chairman of the AMA Committee on Legislation, characterized most national legislative efforts in the health field as "politically motivated . . . hasty and not thought out." He told the political story to date of H. R. 7225, warned that this bill has large popular appeal, and called for firm opposition to such legislation. H. R. 7225 was passed last summer by the U.S. House of Representatives and is now pending before the Senate Finance Committee. It includes a proposal for Federal cash benefits to selected individuals judged to be permanently and totally disabled. Later, in action of the House of Delegates a resolution stated the following policy:

> "That the American Medical Association reiterate in the strongest possible terms its determination to resist any encroachment upon the American system of medical practice which would be detrimental to our patients, the American people;
>
> "That the American Medical Association urge and support the creation of a well-qualified commission, either governmental or private or both, to make a thorough, objective and impartial study of the economic, social and political impact of Social Security, both medical and otherwise, and that the facts developed by such a study should be the sole basis for objective, nonpolitical improvements to the Social Security Act, for the benefit of all of the American people;
>
> "That the American Medical Association pledges its wholehearted coöperation in such a study of Social Security in the United States, and will devote its best efforts to procuring and providing full information on the medical aspects of disability, rehabilitation and medical care of the disabled, and
>
> "That copies of this resolution be transmitted to the President of the United States, to all members of the Cabinet, to

---

* The Ninth Clinical Session of the American Medical Association was held in Boston, Mass., November 29–December 2, 1955.

all members of the Congress, and to all constituent state medical associations."

Further in connection with the OASI program, which Dr. Allman had called a public-relations rather than a legislative problem, the House of Delegates called for state medical societies to poll their entire membership on the question of inclusion of physicians in the OASI provisions of the Social Security Act, and asked that the state societies transmit the results of such polls to the AMA Board of Trustees as soon as possible.

Grievance Committees.—The House of Delegates approved the report of the Committee to Recommend Guides for Grievance or Mediation Committees and commended the committee for "their superb approach to this problem." Purpose of the guides is "to promote general uniformity of organization and function of grievance committees—and better understanding of their purposes—without interfering with the inherent autonomy of constituent medical associations. Constituent associations are therefore urged to implement these guides without delay."

The Reference Committee on Miscellaneous Business made the following recommendations which were adopted by the House:

> "Your reference committee desires to support the recommendations that a brochure be published promptly which will outline the recommendations regarding the activities of Grievance Committees and that this brochure be given wide distribution.
>
> "We recommend also that there be an appendix to this brochure in which additional, practical suggestions shall be included.
>
> "We desire also to support the contention that there should be no equivocation concerning the naming of such committees and we recommend that a uniform policy be adopted in which they are called frankly 'Grievance Committees.'
>
> "Finally, your reference committee recommends that because of the many variables, including the laws of the several states, which may influence the operations or procedures followed by State Grievance Committees, legal counsel shall be sought at the local level within the states."

Special Awards.—Named as the 1955 General Practitioner of the Year was Dr. E. Roger Samuel of Mount Carmel, Pa., whose selection by a special committee of the Board of Trustees was announced at the opening session of the House of Delegates on Tuesday. Dr. Samuel, a former member of the House of Delegates and a general practitioner for 35 years, received the medal and citation presented annually for community service by a family doctor.

Dr. Gunnar Gundersen, AMA Board Chairman, who made the award to Dr. Samuel, also presented a special citation to Dr. Torald Sollmann of Cleveland, Ohio, charter member of the AMA Council on Pharmacy and Chemistry for over 50 years and its chairman since 1936. Dr. Sollmann, 81 years old, was honored for his "outstanding service to the medical profession and on behalf of the advancement of medical science."

MEDICAL PRACTICE

The House passed a substitute resolution offered by the Reference Committee on Insurance and Medical Service to implement the findings and recommendations of the Committee on Medical Practices (Truman Committee), which studied the basic causes leading to certain unethical practices and unfavorable publicity. The resolution, adopted with the proviso that it is subject to review by legal counsel, includes the following points:

> "That a Continuing Committee on Medical Practice be created in the American Medical Association to conduct a study of the relative value of diagnostic, medical and surgical services and to report its findings and recommendations to this House in the same manner as is now followed by other committees and councils of the Association;
>
> "That this committee shall consist of five members of the House appointed by the Speaker, three of whom shall be general practitioners; . . .
>
> "That this committee be directed to utilize all possible means to stimulate the formation of a department of general practice in each medical school;
>
> "That the American Medical Association approve of the medical school teaching programs which afford the medical student opportunity for experience in the general practice of medicine;
>
> "That the representatives of the American Medical Association on the Joint Commission on Accreditation of Hospitals be instructed to stimulate action by that body leading to the warning, provisional accreditation or removal of accreditation of community or general hospitals which exclude or arbitrarily restrict hospital privileges for generalists as a class regardless of their individual professional competence, after appeal to the Commission by the County Medical Society concerned;
>
> "That this committee coöperate in every way and assist the Public Relations Department of the American Medical Association to present a program of public education designed to bring about a better understanding of all fields of medical practice; and
>
> "That this committee use its full influence to discourage any arbitrary restrictions by hospitals against general practitioners as a group or as individuals."

In a complementary action on the same subject, the House also approved a supplementary report of the Board of Trustees which included the following suggestions:

1. All nonsurgical groups should be asked for their suggestions and coöperation in carrying out a public education program on the value of diagnostic and medical work.

2. The various specialty boards should be encouraged to reappraise the practice restrictions on their board diplomates.

3. The American Medical Association should continue to discourage arbitrary restrictions by hospitals against general practitioners.

4. Organized medicine is "ready, willing and able to solve satisfactorily its own problems, and such assurance should be given to the American Hospital Association or any other group concerning itself with such problems."

Sears, Roebuck Foundation.—The House of Delegates commended the Foundation for its thoughtfulness and foresight in sponsoring a plan for financial assistance in establishing medical practice units. The plan provides for long-term unsecured loans for physicians wishing to establish practice in areas in which their services are needed. The program follows the principle of self-help for physician and community alike. It is expected that a relatively modest investment by the Foundation ($125,000 to start) will lead to the development of a large revolving fund, by virtue of pledges of repayment at a rate of $240 per $1,000 of loan.

Medical Ethics.—A proposed revision of the "Principles of Medical Ethics and Precepts of Manners of the American Medical Association" was submitted to the House by the Council on Constitution and By-laws. The following reference committee suggestion was adopted by the House:

> "In discussion it became evident that there was need for wide distribution of these principles and careful study of the proposed changes not only by this reference committee but also by all members of the House and in fact all members of the Association. It seemed desirable also that the two Councils (Council on Constitution and By-laws and the Judicial Council) should meet in joint session to consider these proposals. Your reference committee therefore recommends that these proposals be tabled for further consideration at the next annual session of the House to be held in Chicago in June, 1956.
>
> "In the meantime, it is recommended that these proposals in their entirety be widely publicized and that consideration be given to publishing, in the *Journal of the American Medical Association* and also in state medical journals, these proposed changes in the Principles. It is also recommended that consideration be given to the mailing of copies to each member of the Association. Finally, your reference committee recommends that prior to the meeting in Chicago next June the Council on Constitution and By-laws and the Judicial Council meet in joint session to consider these proposed changes."

In another action on revisions of medical ethics, the House also approved a plan requiring that all resolutions dealing with changes in the Principles of Medical Ethics shall be considered over a period between sessions of the House before final adoption.

PUBLIC HEALTH

Rehabilitation.—In behalf of the Council on Rehabilitation of the Medical Society of the District of Columbia, the delegates from the Society presented the following resolution:

WHEREAS, The handicapped person looks to the medical profession for treatment to restore him (her) to a status of work ability or self help; and

WHEREAS, There are few facilities in the United States which maintain a complete restoration program for the disabled; and

WHEREAS, Numerous lay-sponsored and lay-supported agencies supply partial restorative facilities manned for the most part by personnel having little or no medical supervision; and

WHEREAS, Teaching and training programs in these facilities can give instruction only in limited areas of rehabilitation; and

WHEREAS, Rehabilitation is a broad concept involving the integrated use of multiple disciplines, including medicine, education, counseling, job placement, and others in which medicine should logically accept the over-all responsibility for the general program and to the handicapped individual; and

WHEREAS, There is no organized service or policy now existing in the program of the American Medical Association; therefore be it

Resolved, That the House of Delegates of the American Medical Association establish an integrated consultation service to state societies and outline a policy of procedure for the guidance of local professional groups in dealing with the total program of rehabilitation.

In hearings of the Reference Committee on Hygiene, Public Health and Industrial Health, that resolution was ably supported by Dr. Charles Shields, who came for that purpose at the specific

HOUSE OFFICERS' MEDICAL ESSAY CONTEST

Sponsored by The Medical Society of the District of Columbia

The Medical Society of the District of Columbia invites all residents and interns of hospitals in the District of Columbia to compete in a Medical Essay Contest under the auspices of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, the official publication of the Society.

Essays on original research projects (basic or clinical), review articles, or historical treatises of medical subjects may be entered in the Contest.

Prizes totaling $150.00 ($100.00, first award; $50.00, second award) will be given for the best articles submitted in any one year unless in the opinion of the Editorial Board no essays of sufficient merit are submitted to justify an award. Honorable mention may be given other essays. All essays submitted and accepted for publication will become the sole property of the MEDICAL ANNALS.

Essays must be not less than 6 nor more than 20 double-spaced, typewritten, letter-size pages in length and must be submitted not later than March 1, 1956 to

The Editor
Medical Annals of the District of Columbia
1718 M Street, N. W.
Washington 6, D. C.

Further details may be obtained by writing to the Editor. The Editor reserves the right to edit accepted essays as he deems proper.

request of the District of Columbia delegation.

The reference committee reported favorably on the resolution in principle, and the matter was referred by the House of Delegates to the AMA Board of Trustees for study and activation.

Highway Accidents.—Noting the appalling increase annually in deaths incidental to automobile accidents, the House of Delegates approved the appointment of an AMA committee to study the prevention of such deaths. The action was tantamount to endorsement of principles stated by Shelden in his article on the subject in the J.A.M.A. for November 5, 1955.

Salk Polio Vaccine.—The House of Delegates recommended that further purchase and distribution of this vaccine be carried on by the presently available commercial avenues used for other immunizing agents, and that all vaccines, once proven to be effective, should enter the usual channels of distribution.

MISCELLANEOUS ACTIONS

Among many other actions on a variety of other subjects, the House of Delegates also:

Recommended that the Board of Trustees give consideration to a dues increase for all Association members, with the increase designated for contribution to the American Medical Education Foundation;

Adopted a resolution on the practice of pathology declaring opposition to "the division of any branch of medical practice into so-called technical and professional services";

Commended the Woman's Auxiliary to the AMA for its financial contributions in support of medical education and requested the Auxiliary to continue its active efforts;

Received progress reports from the Commission on Medical Care Plans and from the AMA Law Department on its studies of professional liability;

Approved a Board of Trustees recommendaton that the State Journal Advertising Bureau be separated from the American Medical Association and be given full autonomy;

Congratulated the physicians of Iowa for their efforts in supporting the position that the practice of medicine is the right of the individual;

(Continued on page 58)

IOWA'S HOSPITAL-PHYSICIAN TRIAL

The 13-week trial of Iowa's hospital-physician lawsuit ended last month with the physicians winning a court victory of national significance over Iowa's nonprofit hospitals.

After a lengthy, complicated trial, which aggregated 2,000,000 words of testimony from a total of 50 witnesses, including leading medical and hospital figures from all over the country, Judge C. Edwin Moore, Polk County District Court, Des Moines, upheld the State Attorney General's year-old ruling that hospitals which employ doctors and profit from their services are guilty of the corporate practice of medicine. The District Court's decision has established a precedent that may affect salaried physicians, especially pathologists and radiologists, who were chiefly concerned, across the Nation.

The issues involved in this significant litigation boil down to this essential question: "Do hospitals have the legal right to sell the services of pathologists, radiologists and other physicians?"

Litigation was begun by the Iowa Hospital Association, January 31, 1955, and, according to the *Iowa State Medical Journal*, "amounted to a challenge of a 1954 opinion of Iowa's Attorney General, that hospitals hiring medical specialists and charging patients are practicing medicine illegally."

The Iowa Hospital Association filed suit against the office of the Attorney General, the Iowa State Board of Medical Examiners, and the Iowa Association of Pathologists. Subsequently the Iowa State Medical Society intervened in the case on the side of the defendants.

The trial, which began on May 19 and recessed June 28, resumed September 15. It was finally submitted for Judge Moore's consideration on November 4.

Dr. Walter D. Abbott, Chairman of the ISMS Committee on Medical Practice in Hospitals, appeared as a witness for physicians involved in the lawsuit.

He testified that the hospital-physician controversy in Iowa dated back to the introduction of the Blue Cross Comprehensive 70 contract in 1949. This contract provided for full payment for ancillary services, i.e., X-ray, pathology and anesthesia for which patients were billed by the hospital. Dr. Abbott charged that the contract was discriminatory because it did not cover the services of a doctor of medicine who does not accede to being classified as a hospital employee.

He stated that first official action against the continuance of the contract was taken by the House of Delegates of the Iowa State Medical Society when they requested the Board of Directors of Iowa Medical Service (Blue Shield) to study the inclusion of radiology, pathology and anesthesiology in Blue Shield benefits. This, it was felt, would "relieve Blue Cross of the responsibility for covering those medical services."

Attention was called to action of the House of Delegates of the American Medical Association in St. Louis late in 1953, which resolved that the AMA condemns all insurance contracts which classify any medical service as a hospital service.

Following this action, Dr. Abbott said, the Executive Council of ISMS, on January 7, 1954, voted to appoint a 5-man committee to meet with a similar hospital group with a view of negotiating a transfer of ancillary services from Blue Cross to Blue Shield. The Council agreed that should negotiations fail it would support legal action "challenging the right of hospitals or corporations to practice medicine."

At about the same time, the Iowa State Board of Medical Examiners called upon Attorney General Leo A. Hoegh, now Iowa's Governor, for a ruling. He handed down a decision in February, 1954.

Negotiations between ISMS and the IHA began in March, 1954, and continued throughout the year. However, the two groups were unable to agree upon a contract legally acceptable to the Attorney General.

Dr. Abbott testified that the ISMS and the IHA came reasonably close to a settlement after the Attorney General had drafted a compromise agreement from suggestions on each side. But the IHA refused to concede 2 points which the ISMS has always maintained: "That all of radiology and pathology services contribute to the diagnosis and treatment of illness and that every facet of this work constitutes the practice of medicine.

"In addition, the IHA 'felt that radiologists and pathologists should not be permitted to bill for their services rendered to hospitalized patients' whereas the ISMS 'believes that patients must be billed in a manner which will inform them that they are paying for services of physicians, and that any other approach amounts to secret division of fees—which is not only unethical but also illegal in Iowa.'"

Further attempts to adjudicate the controversy were made during a meeting in Chicago with officials of the AMA and AHA. This attempt also failed and litigation followed.

By ruling in favor of Iowa physicians, Judge Moore supported the contention of pathologists and radiologists that their hospital work is in fact medical service for which they must directly bill their patients.

In fact, the Judge stated, the pathologist or radiologist, by permitting hospitals to bill for medical services in the name of the hospital without the consent of the patient or his legal representative, is guilty of fee-splitting.

Dr. Albert Snoke, President-elect of the American Hospital Association, expressed the opinion that a Nation-wide application of the decision might have a very marked effect on the organization of voluntary hospitals, and possibly upon the operation of voluntary health insurance plans.

Mr. Philip H. Cless, an attorney for the Iowa State Medical Society and other physician-groups involved in the suit, prior to the close of the case commented that "this case may well be a crossroad in medicine and patient care."

NEW REGULATIONS FOR UNIFORM NARCOTIC DRUG ACT RECORDS

In an order of the Board of Commissioners of the District of Columbia (No. 55-1939-A), dated October 11, 1955, the following regulations were promulgated to insure uniform records in the distribution of narcotics:

In accordance with subsection (e) of Section 11 of the Uniform Narcotic Drug Act for the District of Columbia (Act of June 20, 1938; D.C. Code, 1951 ed., Sec. 33-411[e]) and by virtue of the authority vested in the Board of Commissioners of the District of Columbia by said Uniform Narcotic Drug Act pursuant to Section 1 of Reorganization Plan No. 5 of 1952 (66 Stat. 824) the following regulations are hereby adopted and promulgated:

Section 1. All persons required by the Uniform Narcotic Drug Act for the District of Columbia to keep records of narcotic drugs shall keep the records required by said Uniform Act on such forms as may be prescribed by, or under, the Federal narcotic laws in so far as such Federally prescribed forms make provision for recording the information required by said Uniform Act.

Section 2. The official written order form furnished under the said Uniform Act shall be the form of records of sale and of receipt of those narcotic drugs for which said order form is authorized by the said Uniform Act to be used.

Section 3. Any information required by the said Uniform Act to be recorded, and for which no provision for recording the same has been made upon any Federally prescribed form or upon the official written order form furnished under the said Uniform Act, shall be recorded in bound books of such size and shape as may be desired by the person required to keep such records. All pages in such books shall be lined and be of sufficient width to permit the entry in a legible manner upon a single line of all information which the said Uniform Act requires with respect to each transaction. Every page shall be ruled vertically into columns so that similar information with respect to all transactions recorded on a single page shall appear in the same column. Records of narcotic drugs received shall not be kept on the same page with records of narcotic drugs sold, administered, dispensed or otherwise disposed of.

Section 4. In the cases of physicians, dentists, veterinarians and other persons who are authorized to administer or professionally use narcotic drugs, the record book of narcotic drugs administered, dispensed or otherwise disposed of shall show the name of the authorized person and his Federal narcotic registry number at least on the top of the first page. All pages shall be divided into five columns which shall be entitled at the top of each page as "date," "name of patient," "address of patient," "kind of drug," and "quantity," respectively, and each column shall be of sufficient width to permit legible insertion of the appropriate information for a single transaction on a single line within the column. Such form will appear substantially as follows:

Dr. Reg. No.

Date	Name of Patient	Address of Patient	Kind of Drug	Quantity

When drugs are for the use of an animal, the species of animal and the name of the owner shall be inserted in the column, "name of patient."

In entering the record of solutions and other preparations for local application, as described in subsection (a) of Section 11 of said Uniform Act (D.C. Code, 1951 ed., Sec. 33-411[a]), the column headed "name of patient" shall be used to record whether the solution or other preparation was purchased or made up by the person required to keep the record, and the character of the solution or other preparation may extend across the two columns headed "address of patient" and "kind of drug."

In entering the records of lost, destroyed or stolen drugs as required by subsection (e) of Section 11 of the Uniform Act (D.C. Code, 1951 ed., Sec. 33-411[e]), the columns for name and address of patient shall be used to indicate the nature of the loss, destruction or theft.

REVISION OF BIRTH, DEATH, AND STILLBIRTH CERTIFICATES

In accordance with recommendations made by the National Office of Vital Statistics, Department of Health, Education, and Welfare, revised certificate forms for the reporting of births, deaths, and stillbirths will be used throughout the Nation beginning January 1, 1956. On this date revised certificates will become official in the District of Columbia, and all other state departments of public health, in which the responsibility for registration is vested. All previously used certificate blanks become obsolete and are to be destroyed at that time.

The few changes are designed to simplify reporting and at the same time provide more consistent and accurate information.

Birth and Stillbirth Certificates

The Supplemental Sections of the Birth and Stillbirth Certificates have been revised with the advice and concurrence of the appropriate committees of the local medical groups. The revision is one of both form and content, and is designed to simplify reporting of information to the maximum extent possible. In this process, check boxes have been used extensively. This will reduce the amount of writing, thus saving the physician considerable time in furnishing the information. In addition, certain items of information have been eliminated from the Supplemental Section.

A minor change has been made in the Birth Certificate proper in the questions relating to residence. Information as to place of residence has been revised to obtain more specificity of urban residence and to clearly separate the truly rural or farm population. The farm residence question is a simple one, requiring no special definitions of farm, so that only the common understanding of what a farm is can be followed by the informant in answering the questions. For residents of the District of Columbia the answer to this question always will be "no." However, some residents of other areas, giving birth in D. C., may well be farm residents.

The mother's name, together with her full address, is being asked for so that a photostatic copy of the Birth Certificate may be mailed to her. If this information is supplied accurately and completely, the Department will be able to efficiently provide the mother with a complete copy of the Birth Certificate for her child or children.

Death Certificate

Minor revisions have also been made on the Death Certificate. Items requesting date of operation and major findings of operation have been deleted. The significant findings of operations are now to be reported either in the cause of death sequence or as contributory causes. Changes in the residence items follow exactly those described for the Birth and Stillbirth Certificates.

Instructional Information

The covers in which the new certificates are to be bound have taken on a more cheerful appearance. The Birth Certificate covers are to be printed in blue; Stillbirth Certificates in black; and Death Certificates in green.

It is hoped that the information contained in the instructional sections appearing on the outside and inside covers will provide a better understanding of the desired manner of completing the certificates. These sections should be available at all times when certificates are being completed and serve as a ready reference.

Examples of how to complete the medical certification of deaths and stillbirths are included as are criteria for the completion of certain portions of the Supplemental Sections of the Birth and Stillbirth Certificates. These will be found on the inside of the front covers of the binders. The manner of completing the Medical Certification Section of the Death Certificate will be included, even though there has been no change in this procedure. These instructions will be found also on the inside of the front cover of the Death Certificate form books.

The revised forms will be available on December 23, 1955. Hospitals will be sent a supply of birth, death, and stillbirth certificates. Undertakers will be given a supply of death certificates. Physicians may obtain certificates at Room 125, Municipal Center, 300 Indiana Avenue, N. W., or by phoning National 8-6000, Extension 2145.

—*Reprinted from* The Capital's Health, *December, 1955.*

SECOND NATIONAL CONFERENCE ON SPIRITUAL FOUNDATIONS*

For the first time in our history we are confronted with the necessity of needing more than scientific superiority to win a war. Soviet Russia can match our might already, and the threat is that she may eventually outstrip us scientifically. We cannot and will not relax our technical efforts, but the other question that challenges us is, "Can a godless world such as Communism really win over a God-worshipping world?" The next question is, "Are we sufficiently God-worshipping to be worthy of that name?" The Soviet answer would be a sneering "no."

Dr. Charles Lowry's answer is a strong "yes," but with the practical approach that much can be done and should be done to strengthen our stand. He has received high level support from a variety of religious leaders, namely, Roman Catholic, Protestant, Jewish, and Eastern Orthodox. The possibility is inherent to extend this religious action to other great world religions. Dr. Lowry himself has given up the usual ministerial job to apply himself to this which he considers a more universal effort in the cause of God, peace and democracy. The sponsoring group is called the Foundation for Religious Action in the Social and Civil Order. Its purpose is stated as follows: "To bear witness in an age of material greatness to the primacy of the spiritual, to interpret the importance of the religious dimension in practical affairs and common concerns, and to spell out what Americans can do to act effectively in the present crisis."

For this colossal undertaking everyone's help is needed, and that of the professions is solicited particularly. It is the burden of those who have had more privilege than others to gain insights and better understanding, such as physicians, to give back to the people what the people have given them in enrichment of insights.

The program of the Second National Conference on Spiritual Foundations was attended by several members of the Medical Society. They were well rewarded for their efforts by the stimulating program provided by Dr. Lowry and his associates. Among the subjects discussed were "Education and Religion," "Spiritual Factors in National Security," "The Spiritual Role of the Creative Artist," "World Religions and World Peace," "The Spiritual Responsibility of American Business and Industry," and "The Spiritual Responsibility of American Labor." Among the speakers well known to Washingtonians were Vice President Richard Nixon, Rabbi Norman Gerstenfeld, the Reverend Gilbert V. Hartke, Admiral Arthur W. Radford, Mr. Lewis L. Strauss, Sir Muhammad Zafrulla Khan, the Honorable George C. McGhee, Mr. Charles Edward Wilson, and Mr. Clement D. Johnston.

Granted that religious feeling is not something that can be turned on and off like a faucet, it can be fostered and nurtured by concerned individuals and interested groups. Any Medical Society members, their families or friends, who feel a response to this inspiration of Dr. Lowry's and who would like to join forces in his effort are urged to call the Foundation's office at Adams 2-1256.

MILLICENT YATER

---

* This report was prepared for the MEDICAL ANNALS by Mrs. Wallace M. Yater, who attended the Conference on Spiritual Foundations, held at the Hotel Sheraton-Carlton, in Washington, D. C., October 24-26, 1955.

On the Lighter Side

The New Year always brings Hope!—a hope that things in general will be better. For instance, we hope that life will be sweeter to live; that the collective temper of the world in which we live will be unruffled; that the medical profession will come up with something really big on a cancer cure; that our medical colleagues will be less critical of our professional endeavors and more tolerant of the other fellow's point of view.

We hope, assiduously, that the New Year will bring less socialistic meddlers in medicine; more definite security for the waning years of the M.D.; less suit-minded patients with their selfish imaginary reasons for same; more good patients who are rightfully grateful for the tedious time and concerned care that we give them; less sleep-wrecking telephone calls in the small hours of the morning, and many more hours in the day so that we can get done all the many things that we should do but can't find the time to do.

We hope, also, that during the coming year of 1956 our collective digestions will improve; that our livers will be less bilious and our faces more pleasant to look at—especially in the morning. We also wish for that great peace of mind that transcends all human understanding. And, while we are at the wishing well, let us hope that our hearts are pure and free from guile. Happy New Year!

Bowling note: The D. C. Medical Bowling League is high-balling along at an improved pace that is stimulating. The officers of the League (Dr. Gordon R. MacDonald, President) have come up with a workable gimmick that has speeded up the League, closed the gaps between the teams, and has created an emulous interest that has made bowling for 1955–56 a grand pleasure. It is the Position Night, interspersed at mathematical intervals throughout the regular bowling schedule. On this night the first and second teams roll against each other, the third and fourth place teams are opponents, the fifth and sixth place teams ditto, and so on down through the standings. This not only helps to balance the League more fairly, where the individual teams are concerned, but also gives to each team a greater number of chances to bowl against a team of like caliber.

Way back in November, the eighteenth, to be exact, the League sponsored a Turkey Sweepstake in which every bowler who wished to enter could pay his money and take his chances of winning a big, fat, juicy bird for his Thanksgiving dinner. There was a full handicap allowed, and practically all bowlers entered. The following physician-bowlers had turkey for dinner on Thanksgiving: Dr. John P. D'Angelo of the Casualty team, who rolled a set of 344, which with his handicap of 63 gave him the highest set of 407. For this he received the biggest and fattest turkey. The second turkey, in size, was presented to Columbia team's most eligible bachelor (he is still looking for his right hand), Dr. A. J. Connolly. He rolled a set of 337 plus the handicap of 66, which totaled a good 403. The third turkey went to Dr. Andrew J. Betz of the Suburban team, who rolled a high 370 set but received only a 30-pin handicap for a total of 400. The fourth turkey for Thanksgiving was awarded to Dr. Ashby W. Smith of the Garfield team, who bowled a set of 326 plus a 60-pin handicap, which gave him a 386 total. The fifth turkey (some unspeakable scoundrel called it a picked chicken) went to Dr. Benjamin Golden of the Doctors team, who blasted a 310 set, but with his handicap of 72 pins ended up with a 382 set. Thus you see, bowling not only gives you an appetite but occasionally offers one the opportunity to appease it.

As we go to press on December 16 the team standings with won and lost games are as follows: Sibley #1 24-15, Casualty 23-16, Suburban 22-17, Emergency 21-18, Washington Hospital Center 20-19, Prince Georges 20-19, Children's 20-19, Georgetown 19-20, George Washington 18-21, Columbia 18-21, Sibley #2 17-22, Doctors 17-22, Providence 17-22, and Garfield 17-22.

Chuckle note: The female is the sex that believes that if you charge it, it's not spending, and if you add a cherry to it, it's not intoxicating. That is the reason women live longer than men. And it serves them right.

J. Earl Kadan, M.D.

News and Personals

MEETINGS—Past and Future

The Department of Medicine at Georgetown University School of Medicine wishes to announce that Dr. Robert Grant of the National Institutes of Health will give a **basic course in vector electrocardiography,** beginning January 23, 1956. The course, to continue for 6 weeks, will consist of a one-hour session twice a week, Monday and Thursday, at 7:30 p.m., in the School's auditorium. Fee for the course will be announced. All interested physicians are invited to attend.

Dr. Arthur M. Master, cardiologist at Mt. Sinai Hospital, New York, advises the Editor of the Medical Annals that he and his associates are giving the following courses at the Hospital:

January 16–21:	Elementary Electrocardiography
January 23–28:	Advanced Electrocardiography
January 30–February 10:	Cardiovascular Diseases

For further information, physicians may address Dr. Master at Mt. Sinai Hospital, Fifth Avenue and 100th Street, New York 29, N. Y.

The Medical Society's **Section on Anesthesiology and the D. C. Society of Anesthesiologists** held a joint meeting in the Medical Society's building on December 5. Dr. Joseph F. Fazekas, Chief of the Medical Staff at the D. C. General Hospital, spoke on "The Relation of Disturbances in Cerebral Hemodynamics and Metabolism to Problems in Anesthesiology." Dr. Solomon N. Albert, also of the D. C. General Hospital staff, opened the discussion.

Future meetings of the Section are scheduled for February 6 and May 7, 1956.

At the meeting of the **Scientific Council of the Washington Heart Association,** December 7, the program was presented by the Cardiovascular Section of the D. C. General Hospital. Dr. Sol Katz, Chief of the Division of Pulmonary Diseases, was Acting Chairman. The following papers were presented:

"Demonstration of a Protective Shunting Mechanism in Peripheral Vascular Collapse," Drs. Frank A. Finnerty, Joseph F. Fazekas, and Robert L. Guillaudeu

"A New Approach to the Pathogenesis of Atherosclerosis," Dr. Daniel Weiss

"Simultaneous Esophageal and Standard ECG Leads for the Study of Cardiac Arrhythmias," Drs. Albert Kistin, James Bruce, and Elizabeth Hill

"Left Atrial Calcification: Its Anatomical Location, Diagnostic Significance and Roentgenological Demonstration," Drs. James Leonard and Sol Katz

The next scientific program will be held at Georgetown University Hospital, February 20, 1956.

The Section on Ophthalmology held its regular dinner meeting at the Kennedy-Warren, December 13. Dr. Isaac S. Tassman was the guest speaker; his subject, "Factors Concerned with Retinoscopy in Diseases of the Vascular System."

The Washington Psychiatric Society met in the Medical Society's building, December 16. The topic for discussion, "Human Action in the Social System of the Psychiatric Hospital," was presented by Dr Edward Stainbrook, Professor and Chairman of the Department of Psychiatry, New York State University Medical School, Syracuse, N. Y. Discussion of his paper was opened by Dr. Marvin L. Adland, Clinical Director of Chestnut Lodge.

The Society will hold its Annual Dinner Dance on Saturday, February 25, at the Shoreham Hotel.

The Section on Gastroenterology will meet in the Medical Society's building, February 27; the guest speaker will be Dr. Henry L. Bockus, Professor of Gastroenterology, University of Pennsylvania Graduate School. All members of the D.C. Medical Society are invited to hear him discuss "Functional Disorders of the Gastrointestinal Tract," at 8:15 p.m.

METROPOLITAN AREA SCHEDULE OF MEETINGS

Organization/Institution	January 1956	February 1956	March 1956	April 1956	May 1956
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA	—	Midwinter Seminar Feb. 14, 15, 16	Business Meeting Mar. 7	—	Business Meeting May 2
WALTER REED ARMY MEDICAL CENTER Monthly Medical Meetings	Jan. 19	Feb. 16	Mar. 15	Apr. 19	May 17
NAVAL MEDICAL CENTER Guest Lecture Series	Jan. 26	—	Mar. 22	Apr. 26	—
GEORGE WASHINGTON UNIVERSITY School of Medicine	—	Feb. 8	Kellogg Lecture Series Mar. 12, 19, 21	—	—
GEORGETOWN UNIVERSITY School of Medicine	—	—	Kober Lecture Mar. 21	—	—

GENERAL NEWS

At the regular meeting of the **Executive Board of the Medical Society of the District of Columbia,** December 12, the selection of the George M. Kober Lecturer for 1956 was made. The Society has the privilege of making this selection every third year. The selectee is Dr. Harry S. Bernton, who served on the faculty of Georgetown University School of Medicine as Professor of Hygiene and Preventive Medicine for many years. The Lecture will be given at Georgetown University, March 21.

A special committee was appointed to study the structure of the Medical Society's ANNUAL SCIENTIFIC ASSEMBLY and to make recommendations for future ASSEMBLIES. Named to this committee were Drs. Ralph M. Caulk, Alfred A. J. Den, Oscar B. Hunter, Jr., Hugh H. Hussey, and Thomas M. Peery.

The following nominations to various committees submitted by President Morris were confirmed by the Board:

Drs. Preston M. McLendon and George Maksim, Executive Committee of the National Health Fair
Dr. Charles D. Shields, Vice Chairman of the Council on Rehabilitation; Drs. Hugh H. Hussey and Robert E. Moran, members of the Council
Dr. Isadore Rodis, Committee on Mental Health
Dr. Roy L. Sexton, Committee on Cancer Control
Dr. E. Raymond Fenton, Subcommittee on Diseases of the Chest
Dr. James E. Fitzgerald, Chairman, Committee on American Medical Education Fund, succeeding Dr. Karl C. Corley, resigned.

Dr. Fred O. Coe represented the Society at a meeting of the Washington Academy of Sciences, December 9, with the approval of the Board.

Dr. R. Lomax Wells was asked to represent the Society at the AMA Congress on Industrial Health, to be held in Detroit, January 23–24.

The recent death of Mr. Frank R. Strunk left a vacancy among the trustees of the Medical Society's Pension Plan. In accord with the regulations governing the operation of the Pension Plan, the other two trustees, Dr. William M. Ballinger and A. Louise Eckburg, submitted the name of Mr. G. Elmer Flather, Vice President of the Union Trust Company, as the third trustee. The Board approved the selection.

Mr. Remington Kellogg, Director of the Smithsonian Institution, requested that the Society name a representative to serve on a special committee of consultants having to do with exhibits for display in the Hall of Health, which is soon to be installed at the Smithsonian Institution. President Morris submitted the name of Theodore Wiprud, and the Board approved the appointment.

Under **revised promotion policies,** physicians will be eligible for temporary promotion to the grade of Major, Lieutenant Colonel and Colonel one year sooner than other Army officers, it has been announced by Major General Silas B. Hays, Surgeon General of the Army. Consideration is also being given to more rapid promotion of Lieutenants to the grade of Captain.

The action gives additional recognition to the long and expensive training required of doctors before they can qualify for Army commissions. These officers have at least nine years of training beyond the high school level while most other Army officers have less formal education at the time they are commissioned.

With the majority of Army medical officers now serving temporary two-year periods as a result of the Doctor Draft Act, accelerated promotions are another means of attracting career officers into the Army.

Dr. Charles W. Mayo has extended an invitation to Washington physicians and others in the Washington area to submit nominees for the **1956 recipient of the Mutual of Omaha Criss Award.** The award, consisting of $10,000 and a gold medal, is presented for the outstanding contribution during the year to public health and/or safety. Last year's award went to Dr. Jonas E. Salk. Dr. Mayo, of the Mayo Clinic, Rochester, Minnesota, heads the Board of Judges which makes the selection.

Any person who wishes to make a nomination for the 1956 Award may request nomination blanks from Mr. Joseph E. Jones, 102 Ring Building, Washington 6, D. C., or from the Criss Award Board of Judges, Mutual of Omaha, Omaha, Nebraska. Deadline for nominations is March 1, 1956. Included among the judges are Dr. Elmer Hess, President of the American Medical Association; Dr. Thomas Parran, Dean, Graduate School of Public Health, University of Pittsburgh; and Dr. Leonard A. Scheele, Surgeon General of the U. S. Public Health Service. Dr. Scheele and Dr. Parran are Honorary members of the D. C. Medical Society.

Most of Washington's hospitals are to share in the unprecedented grant of $500,000,000 for health and educational purposes, which was announced by the **Board of Trustees of the Ford Foundation,** December 12. The **hospital grants for the Washington area** total $1,872,200. The money is to be used for improvements of, or additions to, facilities and services, additional personnel and training of personnel, and for research. The hospital boards will be required to report preliminary plans for use of funds and to report at the end of two years on the actual or projected use of the funds.

The grants, announced December 12, were as follows for the individual hospitals in the Washington Metropolitan Area:

Hospital	*Grant*
Alexandria	$106,200
Anderson Orthopedic	21,700
Arlington	108,700
Casualty	71,100
Children's	76,500
Children's Convalescent Home	21,100
Christ Child Home for Convalescent Children	11,400
Columbia Hospital for Women	95,400
Emergency	127,100
Episcopal Eye, Ear and Throat	31,900
Eugene Leland Memorial	24,700
Garfield Memorial	133,300
Georgetown University	194,900
George Washington University	226,500
Hadley Memorial	12,700
Hahnemann	20,900
Montgomery County General	29,800
Providence	135,900
Sibley Memorial	117,200
Suburban	68,700
Theodora Snow Memorial	10,000
Washington Home for Incurables	107,800
Washington Sanitarium	118,700

Washington's medical schools will also share in this grant. A total of $90,000,000 is earmarked for the Nation's privately operated medical schools. The funds allocated to each school has not been announced.

The *Washington Star* editorialized on this grant as follows:

> "Never in the history of philanthropy has there been anything comparable to the Ford Foundation's lump-sum grant of $500 million to all the Nation's properly accredited and privately supported colleges, universities, medical schools and nonprofit hospitals. What makes it so splendidly unique, moreover, is not just its breath-taking munificence. It also stands in a class by itself, with a sort of grandeur, because it

JUN 12 1

represents the most striking and most promising effort of its kind to date to cope effectively with some of the harsher of the many educational and health problems now besetting our country."

Georgetown University Medical Center has announced the receipt of the following grants from the U.S. Public Health Service, four of them from the National Heart Institute:

$12,665 to **Dr. Charles A. Hufnagel,** Director of the Experimental Laboratory in Surgery, for a project in cardiovascular and cardiovalvular replacement.

$16,255 to **Dr. Edward D. Freis,** Clinical Adjunct Professor of Medicine, for a study of the chemotherapy of hypertension; and an additional amount of $7,719 to Dr. Freis to be used to study the filtering of foods and waste products through the capillary walls.

$8,518 to **Dr. John C. Rose,** Instructor in Medicine, for studies of circulation in the left ventricle.

$11,137, from the National Institute of Neurological Diseases and Blindness, for a study of the cerebral effects of lead implantations. **Dr. Francis M. Forster,** Dean of the Medical School and Professor of Neurology, will direct the research.

George Washington University School of Medicine has received a grant of $6,613 from the Federal Office of Vocational Rehabilitation for some special work in its Department of Neurology. **Drs. Paul Chodoff and Joseph Abrahams** will use the funds for a study of the factors responsible for adjustment of patients to chronic disease. Patients from the University's Multiple Sclerosis Clinic will be used in this study.

A gift of $5,000 has been received to further arthritis research at the University's hospital. The donor is Mrs. Lucile P. Markey, of Los Angeles, wife of Commodore Gene Markey, author and screenwriter. Dr. Thomas M. Brown, Executive Officer of the University's Department of Medicine and director of the arthritis research program at the Hospital, will administer the fund.

PERSONALS

Dr. Francis M. Forster, Dean of Georgetown University School of Medicine, and Dr. Felipe Martinez, Associate Professor of Anatomy at Georgetown, were awarded the Order of Merit of Carlos Finlay from President Fulgencio Batista of Cuba in special ceremonies in Havana, Cuba, December 3. The Order of Merit, which is an official decoration of the Cuban Government, was established in honor of Carlos Finlay, the Cuban physician who revealed the mosquito as the transmitter of yellow fever. The award is made in recognition of outstanding contributions to the progress of Cuban sciences.

Dr. Forster was recognized for his developments in neurology, his interest in Dr. Finlay, and his teaching activities in Cuba. He has lectured at a number of hospitals and served last summer as visiting professor of neurology at the University of Havana. Dr. Martinez was honored for his 10 years' work in anatomy at the University and for his devotion to Pan-American medicine.

Dr. David E. Buckingham received a citation, October 11, from the District of Columbia Veterinary Medical Association. The citation commended Dr. Buckingham "for outstanding leadership in veterinary affairs in the District of Columbia, where he founded the George Washington University School of Veterinary Medicine, served for ten years as first Dean of this school, and was a Chief Author of Legislation for the District governing the practice of veterinary medicine."

Dr. Buckingham built his own hospital for animals in Washington on Fourteenth Street, N.W., in 1904. At the age of 85, he still maintains his offices at the same location.

In 1907, he was charged by the Board of Commissioners to arrange for the establishment of the District's first Board of Examiners in Veterinary Medicine. He served as first President of this Board and assisted the Corporation Counsel in writing the Veterinary Practices Act for the District.

In 1908, Dr. Buckingham founded the School of Veterinary Medicine at George Washington University, and for the next 10 years he served as Dean of the School.

Dr. Buckingham has been an Associate member of the District of Columbia Medical Society since 1931.

Dr. Paul D. Cantor was sworn in as a member of the District of Columbia Bar at District Court, December 9. Dr. Cantor, an alumnus of Georgetown University School of Medicine, carried on his medical practice while he attended the University's Law School and recently received the degree of Bachelor of Laws. He is Professor of Legal Medicine at Georgetown and will, at the beginning of the 1956 term, join the Graduate Law faculty to teach a course entitled "Medical Problems of the Practicing Attorney." Dr. Cantor plans to continue his medical practice as well as his consultation work in medical jurisprudence.

Dr. J. Winthrop Peabody, Sr., Professor of Diseases of the Respiratory System, Georgetown University School of Medicine, was guest speaker at the meeting of the Pennsylvania Chapter of the American College of Chest Physicians, September 21, in Pittsburgh, Pa. Dr. Peabody is Chairman of the Council on Postgraduate Medical Education of ACCP.

Dr. Peabody was moderator at the opening sessions of the annual Postgraduate Courses sponsored by the ACCP in Pittsburgh, October 2; in Chicago, October 3; and in New York, November 14.

At the latter meeting, **Dr. Charles A. Hufnagel,** Director of Experimental Laboratory in Surgery, also of Georgetown, presented a paper on "The Problem of Aortic Valvular Disease." The paper was given before a session devoted to Surgical Aspects of Heart Disease at the Park Sheraton Hotel, New York, November 16.

Dr. Glen Pincock has been appointed Medical Officer of the National Bureau of Standards and the Diamond Ordnance Fuze Laboratories. Dr. Pincock is a graduate (1934) of George Washington University School of Medicine. He was associated with the late Dr. H. A. Wood for a few years and began private practice in 1937. He is married to Dr. Carolyn S. Pincock, a Washington pediatrician. Both the Pincocks are members of the District Medical Society.

Dr. I. Phillips Frohman has accepted an appointment as American Editor and Correspondent for the *South African Practitioner*, a medical journal originating in Johannesburg, South Africa, and published by the South African Medical Publications, Ltd. Physicians interested in submitting original articles of interest to the general practitioner for publication in this journal should submit them to Dr. Frohman, 2924 Nichols Avenue, S.E., Washington 20, D. C.

At convocation ceremonies, November 4, held in the Grand Ballroom of the Conrad-Hilton Hotel in Chicago, the following members of the District Medical Society were inducted into **fellowship in the American College of Surgeons:** Drs. James D. Brew, Jr., Hamilton P. Dorman, James R. Goodson, Owen Gwathney, Anson R. Hyde, Norman H. Isaacson, Laszlo Ormandy, Arthur F. Passarelli, and Robert S. Smith.

Dr. Monroe J. Romansky, Associate Professor of Medicine, George Washington University School of Medicine, participated in the Third Annual Symposium on Antibiotics in Washington, November 2, 3 and 4. With colleagues he presented two papers: "The Treatment of 171 Patients with Eyrthromycin, including 132 with Bacterial Pneumonia," prepared jointly with Drs. John P. Nasou, David S. Davis, and Ray E. Ritts, and "Acute and Chronic Pulmonary Infections with the Friedländer Bacillus: A Persistent Problem in Early Diagnosis and Treatment." The latter paper was co-authored with Drs. Benjamin M. Limson and James G. Shea.

Dr. Norvell Belt, Chief of Neurology at the Frederick (Md.) Memorial Hospital, was elected President of the Frederick County Medical Society, November 15.

Dr. Belt is well known in Washington. An Active member of the District Medical Society for many years before he moved to Frederick, he is now an Associate member. He was formerly President of the Washington Urological Society, the Washington Medical and Surgical Society, and the Louis Mackall Society.

Dr. Lorenz Zimmerman was one of the speakers in a Symposium on Collagen Diseases during the Fifth Pan American Congress of Ophthalmology, held in Santiago, Chile, January 9–14. Dr. Zimmerman, who is Chief of the Ophthalmic Pathology Section of the Armed Forces Institute of Pathology, also participated in the Scientific Exhibit; with Major William R. Armstrong, of the Ophthalmology Section, he presented an exhibit on diseases of the optic nerve.

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers' Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
November 6	Dr. Theodore R. Pinckney	Early Diagnosis and Treatment of Cancer	Missionary Society, Central Union Baptist Church
November 27	Dr. Irving W. Winik	Early Diagnosis and Treatment of Cancer	Mutual Aid Society
November 28–29	Dr. Charlotte Donlan	Early Diagnosis and Treatment of Cancer	Senior Students, Western High School
December 1	Dr. Joseph Dessoff	Victory Is in Sight—1955	D.C. Society for Prevention of Blindness
December 1	Dr. Frederic G. Burke	Mental Retardation in Children	HELP (Help for Exceptional Little Children)
December 5	Dr. Edward A. Cafritz	Early Diagnosis and Treatment of Cancer	Adult Study Group, Washington Hebrew Congregation
December 5	Dr. Theodore R. Pinckney	Early Diagnosis and Treatment of Cancer	Missionary Society, Central Union Baptist Church
January 16	Dr. Leon Salzman	Morality of Psychoanalysis	Westmoreland Congregational Church
January 18	Dr. Duane C. Richtmeyer	What Does Medicine Hold for My Child?	Parent-Teachers Association, Gordon Junior High School

Dr. Harold Jeghers, Professor and Director of the Department of Medicine, Georgetown University School of Medicine, addressed a staff meeting at Mercy Hospital, Baltimore, December 1, on the subject, "Hemoptysis."

On December 8, Dr. Jeghers was in Boston, where he gave a lecture at Carney Hospital on "The Philosophy of Graduate Medical Education."

Dr. Stanley L. Olinick was Chairman and Moderator of a Panel Discussion on the Establishment of a Psychotherapeutic Relationship before the Regional Research Conference of the American Psychiatric Association, held at Chapel Hill, N. C., November 17–18.

Dr. Melvin G. Alper gave a lecture, November 28, on "Diseases of the Eye" at the University of Pennsylvania in Philadelphia. The lecture was part of a course on Human Hereditary Diseases.

Dr. Milton C. Cobey was elected Vice Chairman of the Section on Orthopedics of the Southern Medical Association during its recent Annual Meeting in Houston, Texas, November 14–17. Dr. Cobey is Professor of Orthopedic Surgery at Georgetown University School of Medicine.

Dr. Benjamin Manchester has been elected to serve as a member of the Section on Therapy of the Committee on Cardiovascular Diseases of the American College of Chest Physicians.

Dr. Charles A. Hufnagel, Director of the Experimental Laboratory in Surgery, Georgetown University School of Medicine, participated in the Sectional Meeting of the American College of Surgeons, held at the Hotel George Washington in Jacksonville, Florida, January 16–18. He spoke on "Vascular Surgery."

Dr. Laurence H. Kyle, Associate Professor of Medicine, Georgetown University School of Medicine, was the principal speaker at the November meeting of the Arlington County Medical Society. Dr. Kyle discussed "Endocrinology in Daily Practice."

Dr. Edward J. Stieglitz was invited to give the Messenger Lectures at Cornell University, in Ithaca,

N. Y., December 12-13. He gave two lectures, one on "Recent Evolution of Gerontology" and the other on "Relativity of Age, Health and Maturity."

Dr. Stieglitz was in Grand Rapids, Michigan, November 8, where he spoke before the Kent County Medical Society on "Health Construction Consultations."

At the regular meeting of the Fairfax County Medical Society, December 13, **Dr. Walter H. Gerwig** was guest speaker. His subject was "The Management of Anal and Rectal Diseases." Dr. Gerwig is Associate Clinical Professor of Surgery at George Washington University School of Medicine.

Dr. Robert M. Greenberg addressed the William Beaumont Medical Society of George Washington University School of Medicine, November 22, on "Psychiatric Emergencies in General Practice."

Dr. Henry L. Feffer was the speaker at the dinner meeting of the District Rheumatism Society, November 2, at the Old New Orleans Restaurant. The subject of his talk was "Physiology of Intervertebral Disc."

Dr. Calvin T. Klopp, Director of the George Washington University Cancer Clinic, has been reëlected a director of the American Cancer Society, Region II, for a two-year term. Region II embraces, in addition to the District of Columbia, Delaware, Maryland, New Jersey, Ohio, Pennsylvania, and West Virginia.

Captain L. K. MacClatchie, (MC) USN, has been transferred to the U. S. Naval Hospital in Yokosuka, Japan, as Executive Officer and Chief of Dermatology. Captain and Mrs. MacClatchie will arrive in Japan around March 1, 1956.

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional current books which, in their opinion, merit comment.

Professor Abbe . . . and the Isobars. The story of Cleveland Abbe, America's first weatherman. TRUMAN ABBE, M.D. Price, $3.50. Pp. 259, with illustrations. New York: Vantage, 1955.

Cancer Cells. E. V. COWDRY, Director, Wernse Cancer Research Laboratory, Washington University, St. Louis; formerly President, American Association for Cancer Research and Fourth International Cancer Research Congress; President, American Gerontological Society and Second International Gerontological Congress. Price, $16.00. Pp. 677, illustrated. Philadelphia: Saunders, 1955.

Henry Ford Hospital International Symposium on Cardiovascular Surgery—Studies in Physiology, Diagnosis and Techniques. Proceedings of the Symposium held at Henry Ford Hospital, Detroit, Michigan; March, 1955. Edited by CONRAD R. LAM, M.D., Surgeon-in-charge, Division of Thoracic Surgery, Henry Ford Hospital. Price, $12.75. Pp. 543, illustrated. Philadelphia: Saunders, 1955.

A Textbook of Clinical Pathology, 5th ed. Edited by SEWARD E. MILLER, M.D., Medical Director, United States Public Health Service; Chief, Division of Special Health Services, Washington, D. C. Price, $11.00. Pp. 1208, illustrated. Baltimore: Williams & Wilkins, 1955.

The Relief of Symptoms. WALTER MODELL, M.D., F.A.C.P., Associate Professor, Clinical Pharmacology, Cornell University Medical College. Price, $8.00. Pp. 450. Philadelphia: Saunders, 1955.

The National Formulary—Tenth Edition (National Formulary X). Prepared by the Committee on National Formulary under the supervision of the Council by authority of the American Pharmaceutical Association. Official from December 15, 1955. Price, $9.00. Pp. 867. Philadelphia: Lippincott, 1955.

Polio Pioneers—The Story of the Fight Against Polio. DOROTHY AND PHILIP STERLING, with photographs by Myron Ehrenberg and the National Foundation for Infantile Paralysis. Price, $2.75. Pp. 128 with illustrations. New York: Doubleday, 1955.

MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, December 12, 1955, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Edwin Davis, Jr., 1801 Eye Street, N.W.
Francis D. Fowler, 1840 Michigan Avenue, N.E.
John S. Haskim, 5002 12th Street, N.E.
Leslie E. Hedgepath, 6th and Bryant Streets, N.W.
C. Janet Hill, 4604 Potomac Avenue, N.W.
Jesse A. Keene, 658 11th Street, N.E.
Alex R. Kelly, 3000 Connecticut Avenue, N.W.
William J. Kennard, 1312 24th Street South, Arlington, Va.
John Mark Keshishian, 4610 Tournay Road
Earl D. Neslen, Washington Clinic
Robert H. Robertson, St. Elizabeths Hospital
Marcus Schaaf, D. C. General Hospital
Charles E. Townsend, 3833 Warren Street, N.W.
Warren S. Wilkins, 3918 Clay Place, N.E.
Robert Young, Shoreham Hotel

Associate Members

Harold I. Amory, 1801 K Street, N.W.
Tsung O. Cheng, 2322 16th Street, S.E.
Hal Curtis Holland, 2117 E Street, N.W.
Joseph E. Rankin, 9114 Riggs Road, West Hyattsville, Md.
Lewis C. Robbins, 2918 28th Street, N.W.

Resident-Intern Members

Edward Lewis, Jr., 8316 Flower Avenue, Takoma Park, Md.
Murray Paul, 1431 Montana Avenue, N.E.

Two New Life Members

Chapter II, Article IV, of the Constitution of the Society, reads as follows:

> Life members shall be active members who have been active members for a total of forty years. They shall have all of the privileges of active membership, and shall be exempt from paying dues and assessments.

Our honor roll now numbers 71. The congratulations of the Society are extended to:

Seniority Number		*Date of Membership*
666	Thomas Madden Foley	March 1, 1916
670	William Francis O'Donnell	March 1, 1916

who have for forty years been on the roster, meeting all dues and assessments and lending their support to the Society by frequent attendance. Their status is now elevated to Life membership.

BOOK REVIEWS

Premature Infants—A Manual for Physicians, 2nd ed. ETHEL C. DUNHAM, M.D., Formerly Associate Clinical Professor of Pediatrics, Yale University School of Medicine; Director, Division of Research in Child Development, U. S. Children's Bureau; and Consultant in Pediatrics, World Health Organization, Geneva, Switzerland. Price, $8.00. Pp. 459. New York: Hoeber-Harper, 1955.

Of special interest to pediatricians, this classic work was first published as a Children's Bureau publication in 1948. It now appears as a second edition completely revised, reset and in a hard cloth binding. The format and type are excellent for easy reading.

Covering all aspects of prematurity, "Premature Infants" is correctly titled a "manual" in that it does not possess fluidity of reading but is beautifully sectionalized for easy reference on any phase of prematurity, whether the information desired be clinical, statistical, or such down-to-earth information as how to "dropper feed" a premature infant or set up a premature nursery.

The author is far from being dogmatic. Dr. Dunham allows the reader to take his choice of several methods of treatment in many instances, but gives substance to fact by quoting a number of investigators in any given field. The massive bibliography accumulated also has an advantage in giving the reader further sources of information.

One might cite the completeness of the section on "Retrolental Fibroplasia" as an example that the volume is up to date. It is only recently that this entity has come to the forefront as being a problem in the field of prematurity.

This book is highly recommended to any in the medical profession who may come in contact with any aspect of prematurity.

ROLAND W. PENICK, M.D.

Differential Diagnosis—The Interpretation of Clinical Evidence. A. MCGEHEE HARVEY, M.D., Professor of Medicine and Head of the Department of Internal Medicine, The Johns Hopkins University School of Medicine; Physician-in-Chief, The Johns Hopkins Hospital, AND JAMES BORDLEY III, M.D., Director, Mary Imogene Bassett Hospital, Cooperstown, New York; Clinical Professor of Medicine, Columbia University, New York; Clinical Professor of Medicine, Albany Medical College. Price, $11.00. Pp. 665. Philadelphia: Saunders, 1955.

In this new volume, Drs. Harvey and Bordley offer, for the first time in book form, a time-proven approach toward the problems of differential diagnosis: the clinicopathological conference. Rather than running through the multiple etiologic possibilities behind a series of signs and symptoms, the authors select for discussion certain major problems commonly encountered in clinical practice: congestive failure, fever of obscure origin, pain in the chest, hepatomegaly, etc. Each chapter of the book is built about one of these entities.

The writers first discuss the various disease states which might lead to the particular pathologic entity under discussion, offering quite valuable comment on the clinical method for differentiating between them. Following this discussion, there is presented a series of cases, each of these cases having been used at some time as a text for a clinico-pathological conference. All of the material of the conference is given, including the case proper, the clinician's analysis, the anatomical diagnosis, and a final commentary on the major features of the case. Each of the cases presented offers opportunity for the reader to utilize not only the diagnostic tools offered in the preceding discussion, but to exercise his own diagnostic abilities as well. Each chapter is concluded by a brief, select bibliography of major writings in the field just discussed.

After presenting a number of such intriguing chapters, the authors offer an entire section of CPC's in which the reader is cast on his own to ferret out the correct diagnosis.

While the text itself is a new addition to the field of medical teaching, the methods upon which it is based are well established, having been used for many years as an integral part of medical instruction programs at numerous universities. The popularity of the "CPC" and the enthusiasm which it arouses speak themselves for the value of the method. This book is an extension of that valuable form of learning.

In short, this volume on differential diagnosis is not a list of signs and symptoms; rather it is a teaching exercise, a learning experience in which the reader actively participates. And this participation will prove to be a challenge for all readers, whether they be beginners or professors.

KENNETH M. MOSER, M.D.

The Management of Obstetric Difficulties, 5th ed. PAUL TITUS. Revised by J. ROBERT WILLSON, M.D., M.S., Professor of Obstetrics and Gynecology, Temple University School of Medicine; Head of the Department of Obstetrics and Gynecology, Temple University Hospital; Consultant in Obstetrics and Gynecology and Chief of the First Service, the Philadelphia General Hospital, Northern Division. Price, $12.50. Pp. 737, with 348 text illustrations and 1 color plate. St. Louis: Mosby, 1955.

This fifth and latest edition of "Titus's Management of Obstetric Difficulties" is a thoroughly revised and clearly presented work, covering the obstetrical problems from the minor annoyances to the serious complications. In addition, Dr. Willson competently presents the physiology, anatomy and mechanism of normal obstetrics before taking up the abnormalities. This coverage is complete to the extent that the present volume may well be used as a textbook of obstetric practice in addition to its titled intent. The author nevertheless conforms to the basic concepts so aptly written indelibly into obstetrical history by Dr. Titus, those concepts which have been and will continue to be of practical aid to practitioners who are meeting and contending with obstetrical emergencies.

The introduction deals with maternal and fetal mortality. There follows a practical consideration of infertility, including causative factors and the investigation of the infertile couple; then the diagnosis of pregnancy, prenatal care and minor complications of the prenatal period. Complications of pregnancy, including anomalies, local infections and neoplasms of the generative tract are dealt with. A section is devoted to general surgical conditions, infectious diseases, and diseases of the urinary tract. There is a comprehensive review of the systemic diseases complicating the pregnant state together with the most recent recognized methods of management. The section on heart disease is particularly well written.

Abortions and their management are included. There follows a review of ectopic pregnancy, its diagnosis and treatment, with the surgical technic well illustrated. Bleeding of late pregnancy, multiple pregnancy and its complications, and toxemias are given adequate coverage.

The complications of labor are prefaced by a description of the normal processes of labor. Dystocia due to the forces, passage and passenger is presented in the classical manner. The section devoted to the pelvis and its abnormalities, and to pelvimetry and its interpretation, is written in an orderly and understandable way, in spite of the somewhat difficult nature of the subject.

There is a section on operative obstetrics, including those pertaining to abortions, breech delivery with the mechanism of partial and complete extraction, forceps deliveries and caesarean section. These are adequately illustrated. The normal puerperium and its complications, including an excellent account of puerperal infection, are next discussed.

The last two sections, on obstetrical analgesia and anesthesia and the newborn infant, are evidence of the timeliness and applicability of this volume. Dr. Vaughan's chapter on the newborn infant, particularly his description of the adjustments to extrauterine life and the physiopathologic disturbances of respiratory function, is notable.

In summary, it is this reviewer's opinion that Dr.

Willson's revision of Titus's well known book would be profitable reading for the student, house officer and practitioner, as well as the specialist in the field.

Alan W. Winshel, M.D.

JOHN HOLMES TRINDER, M.D., F.A.C.S. (1881–1955)

Dr. John H. Trinder, specialist in otolaryngology, who had practiced in Washington for more than 25 years, died, December 10, 1955, after a short illness at his home, 3156 Upland Terrace, N.W.

Dr. Trinder was the son of a physician, Dr. William Trinder, and Adelaide Bradford Trinder. He attended Girard College in Philadelphia and graduated in medicine from Jefferson Medical College in 1904. He interned at German (now Lankenau) Hospital in Philadelphia, 1904–06, and the following year took postgraduate work in psychology at the University of Pennsylvania.

Dr. Trinder served in the Medical Corps of the United States Army for 18 years, from 1910 to 1928, and retired with the rank of Lieutenant Colonel. During World War I he was overseas with the American Expeditionary Forces in France. He was called upon as examiner and consultant for Selective Service in World War II.

Dr. Trinder served on the faculty of Georgetown University School of Medicine from 1930 until he retired a few years ago. He began as Associate in Otolaryngology and later was appointed Associate Professor of Otolaryngology. In 1934 he went abroad to study at the University of Vienna and the University of Leipzig. He was on the staffs of Georgetown University and Episcopal Eye, Ear and Throat Hospitals.

He was elected to membership in the Medical Society of the District of Columbia in 1930. For 10 years, from 1935 to 1945, he was Treasurer of its Section on Otolaryngology and Ophthalmology. He was a Fellow of the American College of Surgeons, and a member of the American Medical Association, the Association of Military Surgeons of the United States, the American Society for the Hard of Hearing, the Washington Society for the Hard of Hearing, and the Keen Surgical Society.

He and his wife, Hermine Lotte Leber Trinder, celebrated their twenty-fifth wedding anniversary in October. His daughter, Mrs. Ann Trinder Jackson, lives in Los Angeles.

Spigelian Hernia—Isaacson

(*Continued from page 26*)

BIBLIOGRAPHY

1. Larson, E. E.: Am. J. Surg., 1951, **82**, 103.
2. Reid, D. R. K.: Brit. J. Surg., 1949, **36**, 433.
3. Sohn, A.: Deutsche Ztschr. f. Chir., Leipz., 1922, **175**, 204.
4. Mersheimer, W. L., Winfield, J. M., and Ruggiero, W. F.: A.M.A. Arch. Surg., 1951, **63**, 39.
5. Bachy, G.: Rev. de chir., Paris, 1937, **75**, 201.
6. Derycke, P.: Bruxelles-med., 1938, **18**, 851.
7. River, L. P.: Ann. Surg., 1942, **116**, 405.
8. Zimmerman, L. M., Anson, B. J., Morgan, E. H., and McVay, C. B.: Surg., Gynec. & Obst., 1944, **78**, 535.
9. McVay, C. B., and Anson, B. J.: Anat. Rec., 1940, **77**, 213.
10. Koljubakin, S. L.: Arch. f. klin. Chir., 1925, **136**, 739.
11. Brandtner, C. E.: Arch. f. orthop. u. Unfall-Chir., 1933, **33**, 219.
12. Teale, T. P., cited by Holloway, J.: Ann. Surg., 1922, **75**, 677.
13. Massaban, Guibal, A., and Cabanas: Arch. Soc. sc. Med. et biol. de Montpellier, 1933, **14**, 340.
14. Sheehan, V.: J. Irish M. A., 1951, **29**, 87.
15. Watson, D., and Scotter, B.: Brit. M. J., 1951, **1**, 74.

Delegates' Report on AMA Meeting

(*Continued from page 43*)

Approved the selection of Minneapolis for the 1958 Clinical Meeting and Chicago for the 1960 Annual Meeting;

Heard Dr. Elmer Hess, AMA President, say that complacency should be regarded as the medical profession's greatest enemy;

Listened to a report from Dr. Leo H. Bartemeier, Chairman of the AMA Council on Mental Health, to the effect that the new Joint Commission on Mental Illness and Health will be ready to embark on its Nation-wide study and reëvaluation of the human and economic problems of mental illness after the first of the year;

Noted with chagrin that physicians are lagging in their financial contributions to medical education, and learned that the AMA Board of Trustees has appropriated $100,000 to be contributed to the American Medical Education Foundation for the support of medical schools, that the California Medical Association has presented a $25,000 check to the AMEF, and that the Utah State Medical Society has announced an $11,000 contribution.

Hugh H. Hussey, M.D., *Delegate*
Raymond T. Holden, M.D., *Delegate*
Theodore Wiprud, *Secretary*

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *February,* 1956 NUMBER 2

THE CHEMOTHERAPY OF TUBERCULOSIS*

Part I. Background Factors

SOL KATZ, M.D., F.A.C.P.

Chief of the Division of Pulmonary Diseases, District of Columbia General Hospital; Adjunct Clinical Professor of Medicine, Georgetown University and George Washington University Schools of Medicine

REMARKABLE PROGRESS has been made in the attack against tuberculosis. These advances have occurred in the categories of prevention, case-finding, diagnosis, therapy and rehabilitation. The most exciting accomplishments have been in therapy, specifically the discovery of various chemotherapeutic agents and knowledge of their application as definitive measures and as adjunctive agents to be used in conjunction with surgical technics.

Unbridled enthusiasm is extant concerning the imminent eradication of tuberculosis based on rapidly declining mortality and slowly falling incidence. However, it would be well to pause momentarily to consider the relapsing nature of tuberculosis, and to caution against sweeping conclusions based on short-term follow-up studies.

An understanding of the chemotherapy of tuberculosis—what it may be expected to do as well as what it cannot accomplish—demands a consideration of (1) the tubercle bacillus and how it is affected by antituberculous agents, (2) the pathology of the process being treated, and (3) the response of the host to tuberculous infection (resistance).

The Tubercle Bacillus and Chemotherapy

Let it be emphasized at the onset that no known chemotherapeutic agent or combination of agents can eliminate all the tubercle bacilli from infected tissue even when such chemotherapy is prolonged.[1-14] D'Esopo, Ryan and Medlar[15] first reported that tubercle bacilli were present in "closed" necrotic lesions after long-term chemotherapy but that these organisms could not be cultivated in most cases when routine culture methods were used. Further confirmation of this concept was soon reported by other observers[16, 17] using standard microbiologic technics as well as more specialized procedures. From these studies the idea was championed that when prolonged chemotherapy resulted in cavity closure or inspissation of cavities, tubercle bacilli contained in these lesions "behave as if they are dead."[18] Indeed, such a theory, if true, would have an important bearing on therapy, since if tubercle bacilli in these "closed" necrotic lesions were not viable there would be little need to resect these graveyards containing the corpses of tubercle bacilli.

---

* This is the fourth of a series of comprehensive reference articles on topics of current medical interest prepared by invitation for the Medical Annals. It is being published in two parts, of which this is Part I. Part II will appear in the March, 1956 issue.

Doubt was cast on this supposition by the thought that bacteriologic technics used to demonstrate viability of tubercle bacilli are inadequate and that because the microörganisms were noncultivatable was not sufficient reason to consider them dead. Hobby[19] indicated that the microbial cells surviving in tissues can be measured only by noting their ability to multiply when inoculated into artificial culture media. Available cultural technics do not determine the viability of tubercle bacilli which are unable to metabolize actively, multiply and divide. Dubos[20] in a magnificently worded discussion summarized a great deal of data which indicated that physicochemical factors within "closed" necrotic tuberculous lesions might suppress the metabolic processes of residual living tubercle bacilli, thereby making their viability difficult to demonstrate. Since tubercle bacilli require an aerobic milieu, the low oxygen tension existing in "closed" lesions may prevent their growth.[21] Furthermore, organic acids like lactic acid accrue in these tuberculous areas as a result of the anaerobic metabolism of the inflammatory tissue cells and exert a suppressive effect on tubercle bacilli. In addition, long-chain fatty acids are released by lipolytic enzymes during caseation necrosis and subdue the metabolic activity of the bacilli.[22] Dubos and Hirsch[23-27] have identified certain substances in normal tissue and body fluids which have antimycobacterial activity. Four groups of basic compounds were isolated: (1) the basic proteins, protamines and histones which are present in cell nuclei and are released during necrosis, (2) the enzyme, lysozyme, which is found in large amounts in leukocytes, which are found in abundance in inflammatory zones, (3) naturally occurring amines, spermine and spermidine, which are present in great quantity in certain tissues and which even in small concentrations when activated by a tissue enzyme, spermine oxidase,[28] prevent the growth of tubercle bacilli, and (4) a basic polypeptide found in the thymus.

These facts indicate that in inflammatory and necrotic tissues an altered biochemical environment exists which may exhibit bacteriostatic or even bactericidal activity against tubercle bacilli. These microbial cells may adapt to these environmental changes, permitting their survival but preventing their multiplication until there is an alteration of circumstances which reverses the inhibitory mechanism so that vigorous bacterial multiplication begins again. The situation is analogous to a spore which remains in a resting state when its environment is detrimental and blossoms into activity when unfavorable influences are removed.

In a beautifully executed study, Hobby and her associates[11, 12, 29, 30] demonstrated that by utilizing a specialized microbiologic technic designed to neutralize the inhibitory agents in necrotic tissue, it was possible to demonstrate viable organisms in "closed" necrotic lesions after prolonged chemotherapy when standard bacteriologic methods failed to indicate viability. Here then was proof of the continued survival of tubercle bacilli which existed in suspended animation in some closed tuberculous foci. Here also was evidence of the in vivo existence of metabolically suppressed tubercle bacilli potentially capable of causing reactivation of disease.

For other reasons the use of antituberculous agents does not mean the elimination of tubercle bacilli. Some of these bacteria develop resist-

Dr. Katz

Dr. Sol Katz, who is an alumnus of Georgetown University School of Medicine (1939), is one of Washington's youngest and ablest medical scientists. He has already done a vast amount of research on cardiopulmonary problems as well as on the evaluation of various therapies in the management of lung diseases. He has to his credit more than 70 contributions to the medical literature, most of which have been on diseases of the lung. In the field of writing it should also be mentioned that he is Associate Editor of GP, official journal of the American Academy of General Practice.

Medically, Dr. Katz is a Washingtonian. After graduating from Georgetown, he interned at Georgetown Hospital and took his residency in internal medicine at D. C. General Hospital, where he is now Chief of the Division of Pulmonary Diseases. He serves both Georgetown and George Washington Universities as Adjunct Clinical Professor of Medicine. As consultant in pulmonary diseases, he is on the hospital staffs of Georgetown, Newton Baker Veterans, Mt. Alto Veterans, Children's, and the Clinical Center of the National Institutes of Health.

Members of the Committee were very pleased when Dr. Katz responded to their invitation to submit this article on the chemotherapy of tuberculosis. It is presented in two parts. Part I furnishes background material, and Part II, which will be published in March, will give the practical aspects in the treatment of this disease with antibiotics.

ance or are initially resistant to the antibacterial drugs to which they are exposed. In addition, many tubercle bacilli exist within macrophages and are not free in body fluids. Although isoniazid is effective against these intracellular organisms, streptomycin can suppress the growth only of the extracellular tubercle bacilli.[31-34] There are also factors present in the environment of tubercle bacilli which antagonize antibacterial agents.[35] Thus, the acidic reaction in areas of caseation necrosis inhibits streptomycin activity, while pyruvic acid, a normal metabolite, inactivates isoniazid. Furthermore, although isoniazid penetrates caseous lesions, streptomycin is relatively ineffective in this regard.

In the studies of Hobby and her coworkers[19,36] no relationship was found between the frequency with which viable tubercle bacilli were found within necrotic residuals and the following factors: (1) the duration of preoperative chemotherapy, (2) the total duration of chemotherapy, (3) the preoperative chemotherapeutic regimens employed, (4) the duration of the preoperative period of noninfectiousness, and (5) the morphologic nature of the lesion, that is, the degree of cavity closure. What was not determined in these studies was whether or not any correlation could be determined between the frequency with which tubercle bacilli could be recovered from "closed" lesions and the anatomic degree of healing of these lesions. Auerbach and his associates[37] studied 65 morphologically "closed" necrotic lesions with the intention of relating the anatomic age of lesions with microbiologic observations. They divided the degree of healing into (1) early healing in which cellular and vascular elements predominate and little or no calcium is present in the necrotic tissue, (2) intermediate healing characterized by a wide area of hyalinized connective tissue surrounding the necrotic zone which contains little or no calcium, and (3) advanced healing in which the necrotic center is almost completely calcified and encased by a hyalinized connective tissue capsule. These careful workers were able to recover tubercle bacilli from all 29 lesions showing early healing and from 6 of 14 lesions (43 per cent) in the intermediate stage of healing. However, only 3 of 22 lesions (14 per cent) in the advanced stage of healing harbored viable tubercle bacilli. Canetti[38, 39] also observed that the proportion of positive cases diminishes as the signs of activity decrease and the caseous material becomes more solid. Tubercle bacilli could be recovered from 72 per cent of recent or softened nonencapsulated nodules, 29 per cent of encapsulated (semi-hard) nodules, 21 per cent of encapsulated (hard) lesions, and none of the chalky or calcified nodules.

It has already been noted that no relationship can be demonstrated between the duration of chemotherapy and the incidence of positive bacteriology in closed caseous lesions. Canetti,[39] however, observes that this merely shows what chemotherapy does to "closed" necrotic lesions examined as such without excluding the thought that chemotherapy may contribute to changing a caseous lesion into fibrous tissue by collagenous replacement. It is also recognized that during chemotherapy an open caseous lesion (cavity) may be transformed into a filled-in cavity or into a fibrocaseous scar. In other words, although chemotherapy may not directly eradicate every tubercle bacillus from a tuberculous lesion, it may indirectly contribute to causing this highly desirable effect by participating in the transformation of a lesion from a caseous necrotic state to a healed fibrocalcific lesion from which tubercle bacilli cannot be cultured.

In contrast to the difficulty with which tubercle bacilli can be grown from many "closed" necrotic lesions stands the relative ease with which viable organisms can be demonstrated in cavities which remain open after chemotherapy. Furthermore, if the cavity remains open after prolonged chemotherapy, further prolongation of therapy does not significantly increase the incidence of negative bacteriologic results. It must be recognized that in many cases of open cavitation remaining after prolonged chemotherapy, sputa may not show tubercle bacilli on examination by culture technics. This apparent paradox is important, and one should not be misled to believe that an open cavity is free of bacilli because the sputum does not contain tubercle bacilli.

The foregoing merely indicates that tubercle bacilli can survive even after prolonged chemotherapy and that the presence of viable organisms within the host indicates their capability of causing relapse.

PATHOLOGIC CONSIDERATIONS AND CHEMOTHERAPY

A fundamental consideration in the relationship between chemotherapeutic agents and their antimycobacterial activity is related to the physiologic state of the bacilli, that is, their phase of growth (multiplication) when organisms and agent(s) are in contact. It is well known that most chemotherapeutic agents are most effective against actively multiplying organisms. The pathologic features of the process being treated, their relationship to the growth phase of tubercle bacilli, and their modification by chemotherapy will now be considered.

Exudative tuberculosis. This early lesion of tuberculosis occurs as the initial tissue response to the presence of tubercle bacilli. It is characterized by increased vascularity, exudation of fluid, and an accumulation of the elements of inflammation at the site of infection. Leukocytes migrate into the alveoli, which also become filled in varying degrees with fibrin, desquamated alveolar cells, exudate and macrophages. Necrosis and caseation are absent but rapidly ensue. Tubercle bacilli in exudative lesions are multiplying vigorously and are therefore more susceptible to chemotherapy. Furthermore, there are none of the restraining influences present in caseous tissue. Since there is no serious opposition to the action of chemotherapeutic agents in exudative lesions, and since there is no irreversible tissue destruction, these lesions heal very adequately under the influence of chemotherapy and are rarely found in resected lung specimens.

It should be expected, therefore, that reversible tuberculous lesions would be predominantly exudative and that antituberculous chemotherapy should be definitive in this kind of disease. Acute miliary tuberculosis and diffuse exudative tuberculous pneumonia are examples of this type of reversible disease which responds so beautifully to chemotherapy. Post-hemoptic and other acute bronchogenic tuberculous spreads are forms of exudative and therefore reversible disease which so often is completely amenable to drug therapy.

Perifocal reaction. This is an inflammatory reaction occurring about the specific tuberculous lesion. It is not caused by tubercle bacilli but rather is a response to the abnormal metabolic products liberated from a necrotic focus and diffusing into the surrounding tissue. The nature of these metabolic substances is not known but probably is histamine-like or represents tuberculoprotein.

Antituberculous chemotherapy results in a remarkable clearing of the perifocal reaction.[40] Since there are few tubercle bacilli in this perifocal zone, its resorption cannot be related to the effect of chemotherapy on the organisms in this area. Rather, it would appear that when the exudative alveolitis clears following drug therapy the metabolic by-products of tubercle bacilli are no longer released and so the accompanying perifocal reaction clears. The clearing corresponds to the decrease of the roentgenographic density which is often striking when the perifocal inflammation is extensive.

Caseous tuberculosis. In general, caseous lesions resolve inadequately and are rather refractory to chemotherapy. It is because of these caseous residuals that chemotherapy so often is incomplete and requires adjunctive resectional surgical therapy for control of the disease process. However, caseous lesions are not completely unresponsive, since in some cases collagen invasion occurs with the conversion of the caseous lesion into a fibrocaseous or even rarely a fibrous nodule. This is more likely to occur in small, early, acute caseous foci, since tubercle bacilli continue to divide until caseation is fully developed. Since chemotherapeutic agents are ineffective against the "resting" bacilli in fully developed caseous lesions the failure of drugs to eliminate tubercle bacilli from these lesions is explained. Any fall in the number of bacilli in solid caseous lesions appears to be due to the antibacterial factors present in necrotic tissue rather than to chemotherapy.

Chemotherapy may prevent softening of solid caseous lesions. Further liquefaction of soft caseation results in cavitation. This may justify the administration of chemotherapy for indefinite periods in patients with solid caseous foci in whom surgical therapy is not feasible. It is possible that continued therapy, although not curative, would prevent softening of the caseous lesions and subsequent spread of the disease.

Acute caseous pneumonic tuberculosis and chronic fibrocaseous tuberculosis are examples of irreversible caseous disease in which chemotherapy is used, not as a definitive measure but in preparation for resection of the residual necrotic lesions.

Cavitation. Cavity closure is one of the most important criteria for the success of a chemotherapeutic regimen. Tubercle bacilli in cavities are in a vigorous metabolic state manifested by active multiplication. This rapid growth phase makes them more susceptible to chemotherapy.

The significance of cavity healing is determined by the type of healing. Before the use of chemotherapy cavities healed by the closed method, which was characterized by obliteration of the bronchocavitary junction as a result of the apposition of the granulating surfaces of the bronchus. There then followed absorption of air from the cavity and collapse of the cavity wall. When the cavity contained a large amount of necrotic material at the time of the obliteration of the bronchocavitary junction the material became inspissated and a closed cavity called an inspissated or filled-in cavity resulted. The caseous contents may be of varying consistency—fluid, soft, grumous, hard, or calcified. It is from these closed necrotic lesions that tubercle bacilli may be seen on smear, although they grow with difficulty when ordinary bacteriologic technics are used. When the cavity contains only a small amount of caseous material at the time of closure of the bronchocavitary junction there finally results a radial scar which occasionally may contain a small necrotic focus. This latter form of closed healing, although more desirable, is less frequent.

The second type of cavity healing is open healing and is very unusual in patients who have not received chemotherapy. It is true bacteriologic healing in which there is complete evacuation of the cavity contents, elimination of the necrotic lining, and its replacement by dense hyalinized connective tissue. The surface lining of the cavity is smooth, and it may be partially or completely covered by squamous epithelium. The draining bronchus is patent and shows no evidence of tuberculosis.

The use of chemotherapy has resulted in important differences in cavity healing, both qualitative and quantitative.[40, 41] When cavities undergo inspissation during chemotherapy the bronchus at the bronchocavitary junction may reëpithelize and remain patent. The epithelium may also extend into the cavity. The reëpithelization of the draining bronchus prevents permanent closure of the cavity, permits greater drainage of the necrotic material from the cavity, and therefore results in a greater incidence of open cavitary healing.[40] Another striking observation seen in inspissated cavities with open bronchi is late liquefication of the necrotic débris brought about by entrance of leukocytes through the bronchus in the course of nonspecific infections. This causes the reappearance of an open cavity when the liquefied contents are evacuated. It is not unusual to observe a cavity in an area previously occupied by an inspissated cavity in patients receiving long-term chemotherapy. These cavities often show no evidence of tuberculosis, although there are no roentgen criteria to indicate that sterilization is complete.

An interesting variant of open healed cavitation is the "bullous cavity."[42-47] Rarely seen in the era before isoniazid therapy, this form of open healing is now rather commonly observed. The cavity is characterized by a thin wall and is therefore mistaken for a lung cyst or emphysematous bulla. Usually the cavity is larger than its original parent cavity and is under atmospheric pressure because of bronchial patency. However, careful pathologic examinations may be required to reveal this communicating bronchus.

Many cavities do not heal during extended chemotherapy. Canetti[39] has enumerated 4 possible causes of failure: (1) the resting state of bacilli in certain cases, especially in old cavities, (2) the intracellular location of some bacilli, which decreases streptomycin effectiveness, (3) the acid reaction of the caseous material, which lowers the activity of streptomycin, and (4) the presence of substances in liquefied caseous matter which inhibit chemotherapeutic agents. In addition, the development of tubercle bacilli resistant to the antituberculous agents used contributes to their ineffectiveness.

There is little question regarding the importance of excisional therapy for the persistent tuberculous cavity. However, there is a strong difference of opinion concerning the need for surgical resection for the inspissated cavity, the clean open cavity, or the "bullous" cavity. Since the larger inspissated cavities often contain viable organisms and are potentially capable of causing a relapse, it would appear logical to remove them. The clean open cavity and the "bullous" cavity are usually sterile, and, if roentgenographic criteria for their recognition were absolute, it would not be necessary to excise them, since there is little danger of their causing exacerbations of tuberculosis. However, these cavities are recognized with certainty only as pathologic entities, and therefore the current trend indicates that they should be removed. Many believe that an unchanged, thin-walled cavity developing during prolonged chemotherapy, without pericavitary infiltration and in the presence of negative bacteriology, does not require surgical therapy.

Host-Parasite Relationships

There are a number of factors within the host which contribute to the inhibition and destruction of tubercle bacilli. These body defenses constitute the term resistance. They operate not only at the portal of entry but as protective mechanisms involving the activities of the body fluids and cells.[48] Although the phenomena of resistance are well recognized, there is no way to measure it. It may be native and determined by inborn factors such as species and racial resistance. Native resistance is influenced by heredity, sex and age. Rich,[49] in a learned discussion concerning the mechanism of native resistance to the tubercle bacilli, admits that there is no satisfactory explanation for most of the differences in the ability of bacilli to live and grow in different tissue environments, nor are the circumstances known that determine species and racial native resistance and susceptibility. Resistance is also acquired in the sense that tubercle bacilli as an antigen provoke specific antibacterial properties in the tissues and antibodies in the body fluids. Resistance fluctuates and is influenced by many factors, such as the state of nutrition, associated illness, and physical and mental overwork.

Although a great deal remains to be learned regarding resistance, it is known that adequate body defenses are necessary in the recovery from tuberculosis. The antituberculous drugs may be bactericidal in those tissues in which active bacterial growth is in progress. However, in those areas in which the bacilli are in a relative resting state the inherent mechanisms of resistance are required to control the infectious agent. As a matter of fact, when the antimycobacterial agents no longer restrain the tubercle bacilli by reason of organism resistance or other factors, then only can host resistance overcome the infection and prevent a reactivation of tuberculosis.

(To be continued)

BIBLIOGRAPHY*

1. Feldman, W. H., Hinshaw, H. C., and Mann, F. C.: Streptomycin in experimental tuberculosis. Am. Rev. Tuberc., 1945, **52,** 269.
2. Feldman, W. H., Karlson, A. G., and Hinshaw, H. C.: Streptomycin in experimental tuberculosis; effects in guinea pigs following infection by intravenous inoculation. Ibid., 1947, **56,** 346.
3. Steenken, W., Jr.: Streptomycin in guinea pig tuberculosis. Ibid., 1947, **56,** 382.
4. Corper, H. J., and Cohn, M. L.: Probable mechanism of streptomycin action in tuberculosis. Yale J. Biol. & Med., 1949, **21,** 181.
5. Jensen, K. A.: Biological studies on streptomycin therapy. Acta tuberc. scandinav., suppl., 1949, **21,** 42.
6. Steenken, W., Jr., Wolinsky, E., Pratt, P. C., and Smith, M. M.: Streptomycin in guinea pigs with discrete chronic tuberculous lesions. Am. Rev. Tuberc., 1952, **66,** 194.
7. Steenken, W., Jr., and Wolinsky, E.: Antituberculous properties of hydrazines of isonicotinic acid (Rimifon, Marsilid). Ibid., 1952, **65,** 365.
8. Buck, M., and Schnitzer, R. J.: Development of drug resistance of M. tuberculosis to isonicotinic acid hydrazide. Ibid., 1952, **65,** 759.
9. Hobby, G. L., Lenert, T. F., and Dougherty, N.: Evaluation of Neomycin and other antimicrobial agents of bacterial and fungal origin, and substances from higher plants. Ann. New York Acad. Sc., 1949, **52,** 775.
10. Hobby, G. L., Lenert, T. F., Rivoire, Z. C., Donikian, M., and Pikula, D.: In vitro and in vivo activity of streptomycin and isoniazid singly and in combination. Am. Rev. Tuberc., 1953, **67,** 808.
11. Hobby, G. L., Auerbach, O., Lenert, T. F., Small, M. J., and Comer, J. V.: Late emergency of M. tuberculosis in liquid cultures of pulmonary lesions resected from humans. Ibid., 1954, **70,** 191.
12. Auerbach, O., Hobby, G. L., Small, M. J., Lenert, T. F., and Comer, J. V.: Clinico-pathologic significance of demonstration of viable tubercle bacilli in resected lesions. J. Thoracic Surg., 1955, **29,** 109.
13. Tompsett, R., McCune, R. M., Jr., Ormond, L., Deuschle, K., Muschenheim, C., and McDermott, W.: Influence of pyrazinamide-isoniazid on M. tuberculosis in animals and man. Tr. A. Am. Physicians, 1954, **67,** 224.
14. McCune, R. M., Jr., and Tompsett, R.: Effect of pyrazinamide-isoniazid and other antituberculous drugs on populations of M. tuberculosis in experimental animals, in U. S. Veterans Administration: Tr. 13th Conference on Chemotherapy of Tuberculosis, held February 8–11, 1954, in St. Louis, Mo., p. 291.
15. D'Esopo, N. D., Ryan, B. J., and Medlar, E. M.: Prolonged therapy with streptomycin-PAS: Clinical-

---

* Editor's note: In this series the bibliography will be presented more fully than customary so that reference material can be readily identified.

pathological correlation, in U. S. Veterans Administration: Tr. 10th Conference on Chemotherapy of Tuberculosis (Streptomycin Conference), held January 25–28, 1951, in Atlanta, Ga., p. 78.

16. Steele, J. D.: Bacteriology of resected tuberculous pulmonary lesions, in U. S. Veterans Administration: Tr. 12th Conference on Chemotherapy of Tuberculosis, held February 9–12, 1953, in Atlanta, Ga., p. 209.
17. Steenken, W., Jr., and Wolinsky, E.: Methods of determining the viability of tubercle bacilli: a critique. Ibid., p. 269.
18. American Trudeau Society: Report of panel discussion on survival and revival of tubercle bacilli in healed tuberculous lesions. Am. Rev. Tuberc., 1953, **68**, 477.
19. Hobby, G. L.: Fate of tubercle bacilli in vivo. Am. J. Med., 1955, **18**, 753.
20. Dubos, R. J.: Chemical factors affecting the survival and multiplication of tubercle bacilli in vivo, in U. S. Veterans Administration: Tr. 11th Conference on Chemotherapy of Tuberculosis, held January 17–20, 1952, in St. Louis, Mo., p. 234.
21. Dubos, R. J.: Effect of gaseous and aqueous environments on survival of tubercle bacilli in vitro. J. Exper. Med., 1953, **97**, 357.
22. Dubos, R. J., and Davis, B. D.: Factors affecting the growth of tubercle bacilli in liquid media. Ibid., 1946, **83**, 409.
23. Hirsch, J. G.: Antimycobacterial activity of various amines related to spermine in chemical structure. Ibid., 1953, **97**, 323.
24. Hirsch, J. G.: Essential participation of an enzyme in the inhibition of growth of tubercle bacilli by spermine. Ibid., 1953, **97**, 327.
25. Dubos, R. J., and Hirsch, J. G.: Antimycobacterial activity of a peptide preparation derived from calf thymus. Ibid., 1954, **99**, 55.
26. Hirsch, J. G., and Dubos, R. J.: Chemical studies on a basic peptide preparation derived from calf thymus. Ibid., 1954, **99**, 65.
27. Hirsch, J. G.: Mechanisms involved in antimycobacterial activity of certain basic peptides. Ibid., 1954, **99**, 79.
28. Hirsch, J. G.: Spermine oxidase: an amine oxidase with specificity for spermine and spermidine. Ibid., 1953, **97**, 345.
29. Hobby, G. L., Auerbach, O., Lenert, T. F., Small, M. J., and Comer, J. V.: Viability of tubercle bacilli in healed tuberculous lesions following chemotherapy, in U. S. Veterans Administration: Tr. 13th Conference on Chemotherapy of Tuberculosis, held February 8–11, 1954, in St. Louis, Mo., p. 291.
30. Hobby, G. L., Auerbach, O., Lenert, T. F., Small, M. J., and Vaughan, L. H.: Emergence of tubercle bacilli from resected pulmonary lesions, in U. S. Veterans Administration; Tr. 14th Conference on Chemotherapy of Tuberculosis, held February 7–10, 1955, in Atlanta, Ga.
31. Mackaness, G. B.: Action of drugs on intracellular tubercle bacilli. J. Path. & Bact., 1952, **64**, 429.
32. Mackaness, G. B., and Smith, N.: Action of isoniazid (isonicotinic acid hydrazide) on intracellular tubercle bacilli. Am. Rev. Tuberc., 1952, **66**, 125.
33. Mackaness, G. B., and Smith, N.: Bactericidal action of isoniazid, streptomycin, and terramycin on extracellular and intracellular tubercle bacilli. Ibid., 1953, **67**, 322.
34. Suter, E.: Multiplication of tubercle bacilli within phagocytes cultivated in vitro, and effect of streptomycin and isonicotinic acid hydrazide. Ibid., 1952, **65**, 775.
35. Dubos, R. J.: Viability of tubercle bacilli in vivo with and without chemotherapy. Ibid., 1953, **67**, 874.
36. Hobby, G. L., Auerbach, O., Lenert, T. F., Small, M. J., and Comer, J. V.: Late emergence of M. tuberculosis in liquid cultures of pulmonary lesions resected from humans. Ibid., 1954, **70**, 191.
37. Auerbach, O., Hobby, G. L., Small, M. J., Lenert, T. F., and Vaughan, L. H.: Effect of degree of healing upon persistence of tubercle bacilli within pulmonary lesions. Ibid., 1955, **72**, 386.
38. Canetti, G.: Union against tuberculosis. Bull. Internat., 1954, **24**, 144.
39. Canetti, G.: The Tubercle Bacillus in the Pulmonary Lesion of Man. New York: Springer, 1955.
40. Auerbach, O.: Pulmonary tuberculosis after prolonged use of chemotherapy. Am. Rev. Tuberc., 1955, **71**, 165.
41. Auerbach, O., Katz, M. L., and Small, M. J.: Effect of streptomycin therapy on the bronchocavitary junction and its relation to cavity healing. Ibid., 1953, **67**, 173.
42. Jacob, J., Cartier, R., and Treps, P.: Quelques recherches tendant a préciser la cause et la nature des images bulleuses observées au cours de la régression thérapeutique des tuberculoses nodulaires diffuses. Rev. tuberc., Paris, 1954, **18**, 85.
43. Bernard, E., and Carraud, J.: Variétés d'aspects et conditions d'apparition d'images bulleuses au cours du traitement de la tuberculose pulmonaire par les antibiotiques. Ibid., 1953, **17**, 1021.
44. Galy, P., Bérard, M., Arribehaute, P., Touraine, R. G., and De Saint-Florent: Cavernes bulleuses: documentation anatomoclinique. Ibid., 1953, **17**, 1037.
45. Simonin, Girard, Lochard, and Sadoul: Images bulleuses pulmonaires. Ibid., 1953, **17**, 1051.
46. Pruvost, P., Delarue, J., Meyer, A., and Depierre: Cavernes tuberculeuses à forme bulleuse. Ibid., 1953, **17**, 1046.
47. Bernou, A.: Les cavernes, dites bulleuses. Ibid., 1953, **17**, 1055.
48. Francis, T., Jr.: Response of the host to the parasite, in Dubos, R. J., editor: Bacterial and Mycotic Infections of Man, 2nd ed. Philadelphia: Lippincott, 1952, pp. 98–118.
49. Rich, A. R.: The Pathogenesis of Tuberculosis. Springfield, Ill.: Thomas, 1946, p. 249.

USE OF DIMETHYLAMINO-N-PROPYLPHENOTHIAZINE IN THE MANAGEMENT OF PATIENTS WITH ACUTE MENTAL DISTURBANCES*

JOSEPH F. FAZEKAS, M.D., *Chief of Staff*
PAUL D. SULLIVAN, M.D., *Resident in Psychiatry*
JOHN D. SCHULTZ, M.D., *Chief of Psychiatry*
District of Columbia General Hospital

IN VIEW of the recognized therapeutic effectiveness of certain phenothiazine derivatives in the management of patients with disturbed mental states, it was considered worthwhile to evaluate clinically a new member of this drug series. Animal studies have shown that dimethylamino - n - propylphenothiazine (promazine,* Sparine†) possesses the same desirable pharmacologic properties as chlorpromazine and that its toxicity is of the same order or less.[1] This report presents our preliminary observations regarding the clinical effectiveness of this new compound.

METHOD

Patients selected for this study were suffering from a variety of acute mental disturbances, including such alcohol-induced syndromes as delirium tremens, acute hallucinosis, acute tremulousness, and inebriation, as well as withdrawal symptoms of drug addiction and agitation due to various psychoses. Promazine was administered intravenously, intramuscularly, or orally in doses ranging from 50 to 400 mg.

RESULTS

Alcoholic syndromes. Delirium tremens. In 15 subjects with delirium tremens promazine was administered by rapid intravenous injection (1 to 2 minutes) of amounts ranging from 100 to 300 mg. Within 5 to 10 minutes after completion of the injection 5 subjects with moderate cases, each of whom had received up to 200 mg. of the drug, fell asleep; they awakened after 5 to 7 hours exhibiting no evidence of delirium tremens except for residual increased tension. The patients were maintained during the following 2 to 3 days on orally administered promazine in doses of 50 to 100 mg. every 4 hours. There was no recurrence of signs or symptoms. This uneventful recovery permitted early discharge from the acute wards.

In 6 other patients immediate sleep was not induced although there appeared to be some reduction of motor activity, and the hallucinations seemed to be less frightening to the subjects. A second intravenous injection (100 to 200 mg.) was given after 2 to 3 hours, and subsequently satisfactory maintenance was accomplished by intramuscular or oral administration of 50 to 100 mg. every 4 hours. Recovery from the major manifestations occurred within 24 to 72 hours.

Four subjects with severe delirium tremens showed little or no improvement after intravenous administration of 200 to 300 mg. of promazine. Pentobarbital sodium in doses of

---

* The dimethylamino-n-propylphenothiazine (promazine) was supplied by Wyeth Laboratories, Radnor, Pa.

† A product of Wyeth Laboratories, Radnor, Pa.

100 to 200 mg. was therefore administered intravenously 10 to 15 minutes after the promazine and resulted in almost immediate sleep which lasted from 5 to 8 hours. On awakening, 2 of these patients appeared to be asymptomatic, and the other 2 required a second intravenous dose of promazine. All were maintained for several days thereafter by oral administration of 50 to 100 mg. of the latter drug every 4 hours. One patient underwent a relapse after approximately 8 hours of oral medication but was immediately controlled by intravenous administration of 200 mg. of promazine with subsequent satisfactory management by intramuscular and then oral therapy.

Acute hallucinosis, tremulousness, and inebriation. In 32 patients with the less severe manifestations of alcoholism or withdrawal, intramuscular or oral administration of 50 to 100 mg. of promazine was usually effective in inducing sleep within 30 to 45 minutes. When sleep did not supervene, there was nevertheless intermittent dozing and reduction in tremulousness. Although there was no objective evidence of tension, many of these patients continued to complain of inward shakiness. Oral or intramuscular maintenance therapy for 3 to 5 days was attended by complete recovery. The dosage ranged from 50 to 100 mg. given every 4 to 6 hours. Patients with acute inebriation were given only 50 mg. because of the possible potentiating effect of the drug upon the depressant action of alcohol. Immediate sleep resulted in 2 such patients, who showed complete recovery on awakening 8 hours later.

Drug addiction; withdrawal symptoms. Six patients admitted because of heroin addiction were given 100 to 150 mg. of promazine orally every 4 hours for 3 to 7 days following admission. Only 1 of these required supplementary administration of methadon for control of withdrawal symptoms. In the remainder, such manifestations as nausea, muscle and bone pains, abdominal cramps, etc. were determined by questioning to be present but were mentioned casually with an air of detachment. Two of these patients slept or dozed during almost the entire therapeutic period, leaving their beds only to care for their personal functions. One of these subjects, who had undergone previous withdrawals, voluntarily stated that this was the easiest of such experiences. The other subject, one of whose symptoms was frequent emesis, fell asleep shortly after the intravenous administration of 100 mg. of promazine. No further vomiting occurred.

Psychotic patients. Six psychotic patients exhibiting acute excitement were given 200 mg. of promazine intravenously on admission and maintained on oral or intramuscular therapy (100 to 200 mg. every 4 to 6 hours) for as long as 2 weeks. Initially there was immediate sleep from which the patients could be readily aroused and which in 2 instances lasted for 24 hours. On awakening, all patients were quiet and tractable and remained so during the period of therapy until transfer to another institution. Upon questioning, 1 patient who was having hallucinations stated that these had by no means disappeared but that she was no longer alarmed by them. "The devil still talks to me, but I don't bother to holler back at him."

DISCUSSION

The degree of central nervous system depression induced by promazine has not been great, and all subjects could be easily aroused. In view of this characteristic it has been found desirable to minimize environmental stimuli by keeping patients in darkened, quiet rooms. The amount, route of administration, and frequency of dose should be governed by the degree of central excitation and the patient's response. Oral administration has been used whenever possible; if vomiting or lack of coöperation was present, the drug was given intravenously or intramuscularly. In this connection it should be stated that local discomfort has been minimal, and there has been no evidence of residual tissue reaction at the site of injection.

In the present series there was commonly observed an elevation of blood pressure and pulse rate prior to institution of treatment. Most such patients exhibited a moderate reduction of blood pressure and pulse rate toward normal values consistent with the effects of relaxation induced by promazine. In none of the patients has there been observed acute vascular collapse, even following the rapid intravenous administration of relatively large doses of the drug, nor was initial tachycardia increased. The latter characteristic often permitted an additional evaluation of the patient's clinical condition, particularly in the alcoholic subjects who frequently exhibited persistent tachycardia despite depression of the "alerting mechanism" with resulting sleep. In such cases the patients on awakening were usually found to have residual psychic tension. In most cases a moderate degree of orthostatic hypotension was noted. In only 1 patient was there observed syncope on standing. (In this case circumstances did not permit immediate determination of the blood pressure.) The reduction in blood pressure on assuming the upright position was associated with an apparently compensatory increase in pulse rate, suggesting that the drug does not impair autonomic homeostatic reflex mechanisms. We have not yet had sufficient experience with either large numbers of patients or long-term administration of large doses to draw definite conclusions regarding such toxic manifestations as jaundice, agranulocytosis, lactation, photosensitivity, or basal ganglia disturbances such as have been observed with other phenothiazine derivatives.

CONCLUSION

The management of patients with central nervous system excitation due to various disturbances can be greatly facilitated by administration of promazine, a phenothiazine derivative. The clinical effectiveness of this drug and the low degree of acute toxicity appear to warrant further investigation.

ACKNOWLEDGMENT: We wish to thank the members of the medical and nursing staff of the Psychiatric Department, District of Columbia General Hospital, for their fine coöperation in this study. The technical assistance of William K. Young, Marie D. Negron, and Julia V. V. Johnson is gratefully acknowledged.

BIBLIOGRAPHY

1. SEIFTER, J., BEGANY, A. J., HUBER, R., AND BRUCE, W. F., of Wyeth Institute for Medical Research, Radnor, Pa.: Data to be published.

THE USE OF METRAZOL IN NON-INSTITUTIONALIZED ELDERLY PATIENTS

ERNEST H. ASCHENBACH, M.D.
Washington

THE LITERATURE to date contains numerous reports (Chesrow,[1] Fong,[2] Levy,[3] Lieberman,[4] Smigel,[5] Sommer[6] and others[7, 8, 9]) on the use of Metrazol in institutionalized patients under professional supervision and continuous observation. These studies have been complete with electroencephalograms, psychometric measurements, complete blood chemistry examinations, and the observations of the attending staff. This, of course, makes for more accurate medication regimen and better records than one may expect in the use of Metrazol in an elderly patient in the home.

Observations related in this report are entirely from lay sources, since therapy was instituted because of the complaints of those associated with my patients, and it is from their reports of improvement that I have evaluated success or failure in treatment. I might mention that one manifestation of this improvement was the decreased number of telephone calls by relatives, complaining of the antics of these patients and abnormalities of conduct.

I started the use of Metrazol on a group of elderly patients about 2 years ago, with the notion of making these individuals more tractable in their own homes and thereby avoiding institutional care. The unfortunate part about this method of medication at the outset is that we must depend on senile individuals to remember their medication, since some of these patients are left alone during the day. Further, medication is lost, hidden, destroyed or bluntly refused because many of these oldsters suffer from the delusion that their relatives are trying to poison them. In view of this difficulty I have started the use of Liquid Metrazol on individuals in whom this problem is manifest, since in this way the liquid must be swallowed in the presence of the dispenser. As with these many difficulties in seeing that medication is given properly and in sufficient dosage, the problem of measuring results also is a difficult one, since many relatives weigh critically the results of medications against cost, even though at the first manifestation of senility on the part of their loved ones, they were willing to do anything to improve their condition. This has made it difficult at times to keep patients on an appraisal month, the minimum period I have found necessary for evaluating whether Metrazol is of value or not. It was interesting to note in some cases in which a test month was carried out that, in spite of the fact that the relatives could see no improvement, I have subsequently been told, "We can see a return to their former conduct; may we start medication again?" So, though the senile antics of their relatives loomed like ogres to those around them, the former improvement under treatment was soon forgotten and only the return of symptoms brought back the primary alarm.

The symptoms of senility for which I started therapy were: loss of memory, confusion, nervousness, possible suicidal tendencies, insomnia, fear of loss of mind, and loss of memory for surroundings, viz., beliefs of not being home and wandering off, a most distressing symptom to the relatives.

It is quite apparent that an individual who cannot remember from one minute to the next presents difficulties in a household, and these would be still further complicated by any tendency to wander off from time to time. Such a situation makes for the need of constant attendance. The symptoms mentioned were some of the reasons for the complaints by relatives which prompted me to place the patients on Metrazol. Further benefits from improved medullary circulation will be noted in the case reports which follow.

Early in my use of Metrazol I started with $\frac{3}{4}$ grain 4 times daily and gradually raised the dose, but, having seen no untoward reactions of any kind, I now start all patients on 2 tablets 4 times daily and raise or lower the dose as I see fit. The patients included in this report were otherwise in good physical condition for their age, namely as to blood, etc. They were either normotensive or mildly hypertensive, and the administration of Metrazol at no time changed blood pressures sufficiently to necessitate altering dosage or discontinuing medication. In fact, with the experience I have had with Metrazol I have come to expect no unusual blood pressure changes or untoward reactions.

Illustrative Cases

Case 1. C. R., 80 years of age with a blood pressure of 150/90, started on Metrazol on March 26, 1954 because of loss of memory, since he could not go from one room to another for something without calling back to his wife and asking her why he went there. He also had a constant buzzing in his head of a non-labyrinthine nature. After 1 month of therapy his wife reported to me that she didn't see any change. The patient also felt no better. Medication was therefore discontinued, but after 2 weeks the man's wife said, "I am sorry I hadn't realized that my husband was able to go about the house and do things he did not do before; may we reinstitute therapy?" This was done with return of the improvement. However, the buzzing in his head, which I had hoped Metrazol would help, still persists.

Case 2. M. M., a woman 82 years old with a blood pressure of 165/100, started treatment on May 5, 1954. This patient felt that she was going to commit suicide, had buzzing in her head, walked the floor and constantly wrung her hands, thought that she wanted to die but didn't want to die, and kept the household in a constant state of turmoil. With the use of Metrazol in full dosage, 3 grains 4 times daily, I have seen a prompt change in her general conduct. She no longer talks of death, does not feel that she is going to destroy herself, and is able to sit quietly in the house. These improvements are definitely manifested by the decrease in the number of telephone conversations which we have now when compared to the number we had to have before Metrazol therapy was instituted.

Case 3. V. P., a woman aged 71 with a blood pressure of 175/85, started treatment on May 7, 1954. The reason for this was her inability to carry on her routine housework and remember what she had done and what she had to do. This became very annoying, especially in the preparation of meals. This patient had always been annoyed at taking medicine and also, though it was not necessary, begrudged every cent spent for medicine. After the institution of Metrazol therapy she stated that it improved her so much that she could do her housework with a great deal more mental comfort, and she desired to continue the medication even though she did not wish to come to the office to be examined.

Case 4. C. R., a woman 90 years old with a blood pressure of 185/90, started treatment on October 29, 1953. She takes care of an apartment and cooks the meals for herself and 2 other relatives. The latter noticed that she was forgetting what to put into the pot but insisted on continuing cooking although she had to ask them for assistance. After Metrazol therapy she was able to carry on without help and now refuses to lower the present dosage of 3 grains 4 times daily.

Case 5. A. H., a woman 82 years old with a blood pressure of 135/80, started treatment in October, 1953. She had loss of memory and frequent attacks of circulatory collapse, which were manifested by extreme weakness, cold sweat, mild cyanosis and weak cardiac function. These had been occurring at the rate of at least once a week and were very alarming to the family. After Metrazol therapy this type of attack was completely eliminated. According to those around her the memory of the patient was definitely better than it had been and they did not wish to discontinue the Metrazol, even as a trial. This individual frequently thought that she was in a cage, and much to the joy of the relatives this annoying symptom disappeared after the first month of therapy.

Case 6. C. E., a woman 68 years old with a blood pressure of 200/90, started treatment on November 12, 1954. The symptoms, aside from those of loss of memory, were attacks which took the form of petit mal seizures. These would be accompanied by a loss of bladder control, a very pallid color, and a feeling of extreme weakness. The daughter said that at these times her mother looked as though she were about to die. Even though there have been some reports in the literature regarding the occurrence of convulsions with the use of Metrazol, I decided to institute Metrazol therapy and see if we could not bring about an improvement in cerebral circulation. Results were not too encouraging, and the family wished to discontinue medication after 1 month. However, with some urging they allowed me to continue the medication. It was about 3 months before any improvement was evident. Then the daugher announced to me that she found that her mother was getting fewer attacks. At her last visit she had not had an attack of the serious type for 3 months and only once had she lost bladder control.

Case 7. J. H., a man aged 64 with a blood pressure of 210/130, began the use of Metrazol on March 10, 1953. This man's wife complained that his loss of memory was so bad that she was unable to have him keep his own clothes in order and that he was unable to hold any conversation with her and remember any part of it thereafter. This did not seem to annoy him and he did not wish to start treatment; however, with a little urging he allowed it. After 6 weeks he announced that he thought he was no better, and his wife was of the same opinion. He still insists his memory for his work is better than that of many of the young men around him. The fact that we did not get more improvement in this patient is obviously due to the fact that this man has a long history of hypertension and has organic changes in the central nervous system which preclude improvement.

Case 8. M. M., a woman aged 82 with a blood pressure of 170/80, started treatment in January, 1955. She had been causing great concern to her daughter because of the fact that she was very forgetful, was wandering off, and on frequent occasions had to be picked up by the police and returned home. Conditions got so bad that we placed the woman in a home where she was 1 of 3 guests. Her daughter, upon visiting her mother, became annoyed at her mother's extreme forgetfulness and suffered great heartache after leaving the home. It was at this point I decided to begin Metrazol therapy because of the daughter's extreme sadness about her mother's state, even though I had thoroughly explained to her that her mother remembered nothing of her visit and did not cry after she left the home. With treatment the patient's memory became so much improved that she would cry the entire night after her daughter's visit.

It was after one of these all-night sessions of crying and wishing that her daughter would return and take her back to her apartment that she went into a congestive heart failure which was irreversible. In thinking over this situation I feel that possibly it would have been better if we had let the lady enjoy her loss of memory.

Case 9. D. M., a woman 67 years of age, with a blood pressure of 210/100, started treatment in November, 1954. After a very irregular course of medication of about 2 months she announced that she thought she was not better and was wasting her money taking any more of the pills, and she discontinued them. This patient lived alone in an apartment, and whether she remembered to take her pills is questionable. I mention this type of case because it shows the difficulties which we face when we attempt to evaluate medication in elderly patients on whom we depend for the treatment.

Case 10. V. R., a man 78 years old with a blood pressure of 155/85, began treatment on April 6, 1954. He took Metrazol off and on, never more than 2 weeks at a time and would disappear, return later, and say he was no better. I urged him to take the drug continuously because of his distress over his loss of memory, but he would state that he saw no benefit from the pills and didn't feel he could afford to buy them.

Case 11. M. M., a woman aged 85 with a blood pressure of 170/90, started treatment on August 17, 1954. Treatment was instituted because the daughter discovered one day that her mother was losing her memory, and she came to the office extremely distressed, saying that those things didn't happen in their family. Though distress was great, I could get no coöperation on the part of the daughter in continuous medication, and the patient continues to wander around the street and finally finds her way home, but, since the daughter has become used to the loss of memory on the part of her mother, she is no longer distressed and apparently does not care to continue the medication.

Case 12. C. L., a woman aged 62 with a blood pressure of 135/80, started treatment in January, 1955. She came to the office with the complaint that her friends were noticing that she was unable to carry on a conversation without hesitating in every sentence to remember what she wanted to say. This so alarmed them that even though they did not want to hurt her feelings they informed her that obviously something was wrong because her difficulty had come on slowly in the past several months. Metrazol treatment was instituted, and after 3 weeks she returned to the office and said that her friends had noticed that she is showing an improvement in her ability to carry on a continuous conversation. All other examinations of this patient were normal.

(*Continued on page 116*)

DISTRICT OF COLUMBIA BLOOD-TESTING SURVEY FOR SYPHILIS IN SELECTED INDUSTRIES AND TRADES

ROSS TAGGART, M.D.
TRUXTON MORGAN, M.D.
JOHN PENDLETON, B.S.

Preventable and Chronic Diseases Division, Bureau of Disease Control, District of Columbia Department of Public Health

BETWEEN March 15 and June 30, 1954 the Department of Public Health of the District of Columbia conducted a blood-testing survey for syphilis. This survey was undertaken in coöperation with industrial and trades employers to determine those industries and occupations in which the personnel might have a high rate of syphilis and might be in need of treatment. It was thought the findings would aid in guiding future industrial testing, not only in the District of Columbia, but in other comparable areas, giving indication of those industries in which syphilis is most prevalent.

In preparation for the survey, staff members of the Department of Public Health met with employers, industrial managers, and union leaders. Industry and agency employers were asked to designate dates that blood-testing teams could go to a job location and on the premises test the employees as a group. Also, approximately 1,000 residents of a public housing project were tested. Seven hundred of these were not job-holders.

The public health necessity for blood testing programs was explained very carefully to the employers and employees. The response was extremely satisfactory.

Although the survey required the support of employers and management, there is still a stigma attached to this type of infection. Many persons, no doubt, would have been reluctant to take the test without the assurance that they alone would receive the results. Therefore, only a total count of the employees who were tested and the number positive, but not the result of the individual test, were given to the employer. Each management had the assurance of the Preventable and Chronic Diseases Division that all persons whose tests indicated need for treatment would be treated after an interview and physical examination.

"On-the-job" testing was done by mobile teams of technicians and clerks. The size of the team depended upon the anticipated number of participants in each organization. Service was offered to meet the employees' convenience anywhere in the city and also at any time of the day or night. The teams were in operation as early as 5:00 a.m., catching midnight shifts going off duty, and occasionally worked as late as 1:00 a.m. the following day. They transported the necessary equipment and supplies with them to insure a fast and efficient job. Each management was guaranteed a minimum of lost work hours. The time lost per worker from his job was between 5 and 15 minutes.

Each group scheduled to be tested was supplied with posters, literature, and venereal disease information pamphlets well in advance of the testing date. This stimulated interest in the program, and persons who at first expressed no desire to take this test were influenced to take it.

The results of the survey were classified in three ways: (1) by the employer with whom the testing arrangements were made, so that he might be given the over-all findings for his own employees, (2) by the type of industry included in the survey, and (3) by the occupation of the person tested. Industry and occupation classifications were made according to the 1950 Alphabetical Index of Occupations and Industries, prepared by the U. S. Bureau of the Census.

INDUSTRY

Altogether, tests were done for 75 employers ordinarily thought of as operating commercial concerns. In addition, there were 17 subdivisions of the Federal Government and 25 of the District Government in which employee groups were tested. Also, some members of the staff of one hospital and the personnel of one educational institution were tested. This made a total of 119 "employers." How they were distributed among functional groups is shown in table 1. Examination of the table will show that "industry" is only a loose term, since all but 3 of the commercial employers were in transportation, sales, or service. Industry categories were listed in descending order of per cent of tested employees needing treatment. The item "District Government" included employees of the Sanitation, Water and Highway Departments, and the cleaning force of the Municipal Center. "White collar" workers comprised less than 2 per cent of the total District employees tested. Under the Federal Government, office workers made up more than 80 per cent of the total tested.

TABLE 1

Per cent Reactive and Per cent Needing Treatment in Industries Testing 100 or More Persons

Industry Tested	Number Tested	Per cent Reactive	Per cent Needing Treatment
Laundries (incl. Q.M.)	316	17.09	8.39
D. C. Government	1,822	18.94	7.11
Warehousing and Trucking	413	12.11	5.18
Hotels	3,307	12.61	4.95
Construction	356	16.57	4.83
Wholesale Dealers	357	4.76	2.80
Retail, Other than Grocery or Eating Places	481	4.37	1.79
Retail Groceries	821	5.48	1.53
Eating and Drinking Places	541	14.42	1.36
Federal Government	5,419	3.69	0.94
(Included Above)			
Wholesale and Retail Trades			
Food and Related Products	1,153	5.12	1.79
Eating and Drinking Places	541	14.42	1.36
Other	506	6.13	2.12
TOTAL	2,220	7.57	1.75
ALL PERSONS TESTED	15,178	9.28	3.21

If the industries other than the 2 governmental groups are considered, it will be seen in table 1 that the per cent reactive ranges from 17.09 for laundries to 4.37 for retail stores. Warehousing, hotels, construction, and restaurants are well above 10 per cent reactive, and the distribution trades are considerably under 10 per cent, averaging 4.87 per cent. The per cent needing treatment ranges from 8.39 for laundries to 1.36 for restaurants.

The small percentage of positive reactors in the restaurant workers' groups who needed treatment reflects the effects of past program activities in the District of Columbia relating to food handlers. Nearly 14.5 per cent of those tested were reactors, but when their histories were checked only 1 out of 11 of these reactors were unknown to the Department of Public Health or required additional therapy for their infection. This compares with half of the reactors who needed treatment among workers tested in laundries.

OCCUPATION

At the time the blood specimen was drawn each person was asked his occupation. The responses were classified according to the Census occupational code as indicated above. Results of the tests were tabulated in broad groups as shown in table 2. Each group is more or less self-explanatory, with the possible exception of operatives and service workers. "Operatives"

TABLE 2

Blood-testing Results by Industry within Occupation

Occupation and Industry	Number Tested	Per cent Reactive	Per cent Needing Treatment
Unskilled Labor			
D. C. Government	1,190	23.61	8.95
Transfer and Storage	119	15.97	6.72
Wholesale-Retail Food	167	11.98	5.04
Construction	139	17.99	4.91
Wholesale-Retail Nonfood	50	10.00	4.00
Federal Government	244	9.02	2.46
Hospitals	89	7.87	1.12
Operative, Skilled Labor			
Laundries	248	17.74	9.68
Hotels	195	21.54	9.23
D. C. Government	273	18.68	6.72
Transfer and Storage	170	10.59	6.47
Wholesale-Retail Nonfood	103	2.91	1.94
Wholesale-Retail Food	385	3.42	1.82
Federal Government	92	5.43	1.09
Hospitals	76	3.95	0.00
Service Workers			
University Char Force	47	19.15	10.64
Wholesale-Retail Nonfood	52	13.46	5.77
Hotels	2,533	13.42	5.36
Federal Government	126	11.11	4.76
D. C. Government	55	14.55	2.08
Eating and Drinking Places	349	16.91	1.78
Hospitals	414	9.90	1.24
Craftsmen			
Construction	43	13.95	4.65
Hotels	155	7.10	2.84
Wholesale-Retail Nonfood	66	4.44	1.52
Hospitals	132	3.79	1.90
Federal Government	144	6.25	1.39
D. C. Government	191	2.09	1.40
Wholesale-Retail Food	50	4.00	0.00
Salesworkers and Clerical			
Wholesale-Retail Nonfood	168	6.55	1.19
Federal Government	3,226	2.05	0.55
Hotels	259	2.32	0.47
Wholesale-Retail Food	362	2.49	0.28
Professional and Managerial			
Federal Government	192	1.04	1.04
Hotels	104	2.88	0.00
Wholesale-Retail Food	100	1.00	0.00
Hospitals	151	0.00	0.00

include such occupations as crane operators, truck, taxi and bus drivers, dressmakers, laundry workers, pressers, etc. "Service Workers" include barbers, char forces, cooks, elevator operators, housekeepers, porters, waitresses and waiters. Those not employed are shown in separate groups.

What should be noted particularly is that, in so far as the persons tested represent the employed population of the District, the venereal disease control problem is in other than "white-collar" groups. Based on census distributions of employees, more than 80 per cent of the cases needing treatment will fall in the 3 lowest-paid occupation groups.

Those persons tested who were not in the labor force, such as housewives, students, etc., had a reactivity rate of 3.40 per cent with 0.82 per cent needing treatment for syphilis.

It is interesting to examine occupational groups within industries as shown in table 2. There is a relative consistency of an inverse relationship between degrees of skills and the rates of reactivity. Where laborers comprise a group within the industry, they have the highest rate. Operatives are second only to laborers, generally followed by service workers and then craftsmen.

AGE

Since the survey was designed to test segments of industry, it is not proper to make generalizations as to the whole population of the District. However, it is interesting in table 3 to observe by age the serologic patterns of those persons tested. Table 3 shows that the great bulk of those tested were naturally in the employable ages and that the younger ages are not proportionally represented.

SYPHILIS FOUND

Although the survey was primarily intended to determine those industry-occupation groups with high syphilis prevalence, it was also very valuable in case-finding. Of the 15,178 persons tested, 1,408 had reactive or weakly reactive results. All but 74 of these (94.7 per cent) were located and brought to examination, either by the District Department of Public Health or, when appropriate, by the Health Department of the surrounding counties. Of these 1,334 persons, 206 represented new cases of syphilis brought to treatment, and 255 were persons returned for more treatment. The amount and regularity of arsenical or penicillin previously given, serologic titer, and spinal fluid and clinical findings were weighed before treatment or re-treatment was instituted. Briefly, if it was confirmed that the patient showed no signs of late syphilis, had received at least 20 arsenicals, or 2.4 million units of penicillin, serologic test was reactive only at dilutions of less than 1 to 4 (16 Kahn units), and spinal fluid was negative, he/she was considered to have had adequate treatment. Also, serologic reactors who had received more arsenicals or a larger amount of penicillin than that described above, clinically showed no signs of late syphilis, and had a negative spinal fluid, even though their serologic titer was high, were considered not to need treatment. No attempt was made to rule out biologic false reactors, and all whose tests were reactive or weakly reactive and who did not meet the above criteria were treated. The 206 new cases were: 1 case of primary, 24 of early latent, 177 of late latent, 3 of neurosyphilis, and 1 of congenital syphilis. Of the 255 cases returned for further therapy, 19 were early latent, 222 late latent, and 14 neurosyphilis. This makes a total of 461 brought to treatment.

TABLE 3

Blood-testing Results by Age

Age Group	Total Tested		
	Number Tested	Per cent Reactor	Per cent Needing Treatment
Under 15	53	1.89	0.00
15–24	1,655	2.42	0.62
25–34	4,598	5.50	1.24
35–44	4,350	11.17	3.47
45–54	2,936	15.84	6.64
55–64	1,177	11.38	4.67
65 and over	259	8.88	4.25
Not stated	150	4.00	1.33
TOTAL.......	15,178	9.28	3.21

Of the 1,334 persons examined, 696 were found to have had adequate treatment for their infections. As a testimony of the effectiveness of treatment, of 63 cases who had been treated for neurosyphilis, it was found that, although still reactive to the serologic test, they were all gainfully employed.

Diagnostically, the 63 adequately treated and arrested neurosyphilis cases were grouped into: 5 early asymptomatic, 23 late asymptomatic, 1 tabes, 4 paresis, and 30 not stated, but presumably asymptomatic. The tabetic and 1 of the paretics were working as elevator operators. Of the other 3 paretics, 1 was working as a janitor, 1 as a laborer, and the other as a clerk.

It appears from this report that treatment has been given to only about two-thirds of the total employee group having a positive serologic test for syphilis. While this is an encouraging indication of case-finding prior to this study, the total number of people in the city who still need discovery and treatment is large. If the rates within the various occupation classifications are applied to Washington's total working population, it will be seen that many thousands of workers still need to have their syphilis discovered and be given treatment for their infection.

These data point out graphically the need for continued case-finding in Washington if the germ of syphilis is to be stopped from crippling many of our valued workers.

ACKNOWLEDGMENT: The District of Columbia Department of Public Health is indebted to the Statistical Section of the Venereal Disease Program, Bureau of State Services, United States Public Health Service, for the tabulations presented.

DISTRICT OF COLUMBIA GENERAL HOSPITAL CLINICAL CONFERENCES*

BACTERIAL ENDOCARDITIS

MODERATOR

HUGH H. HUSSEY, M.D., F.A.C.P.

Associate Professor of Medicine, Georgetown University School of Medicine

GUEST DISCUSSORS

MAXWELL FINLAND, M.D., F.A.C.P.

Associate Professor of Medicine, Harvard Medical School; Chief, Fourth Medical Service, Boston City Hospital, and Associate Director, Thorndike Memorial Laboratory

CHARLES A. HUFNAGEL, M.D., F.A.C.S.

Professor of Surgical Research, Associate Professor of Surgery and Director of Experimental Surgery, Georgetown University School of Medicine

DR. HUSSEY: It may seem strange to hold a combined medical-surgical conference on the subject of bacterial endocarditis. Indeed, this is the first time we have ever used this topic for such a conference. Of course, there are two points at which the interest of surgeons and medical men intersect in connection with endocarditis. The first concerns prevention of the disease by preoperative administration of an antibiotic to patients who have a background of rheumatic heart disease or congenital cardiovascular disease. The second intersection is in the matter of embolism that occurs as a complication of bacterial endocarditis, because when the embolus involves a peripheral artery, the surgeon's services may be needed. However, today's conference is concerned not so much with these points of common interest as it is with the problem of endocarditis involving the aortic valve.

Without saying more about the reasons for presenting the cases, we'll let the cases speak for themselves. All 3 of them will be presented, before any discussion is given, by Dr. Sydney P. Hecker.†

DR. HECKER: **Case 1** concerned C. F., a 53-year-old Negro, who was admitted to the Hospital on December 31, 1954 because of sudden onset of confusion, aphasia and right-sided weakness. These were preceded by a 3-week illness characterized by vague anterior chest pain and cough productive of yellowish sputum. Three days prior to admission repeated rigors occurred. There was a past history of hypertension.

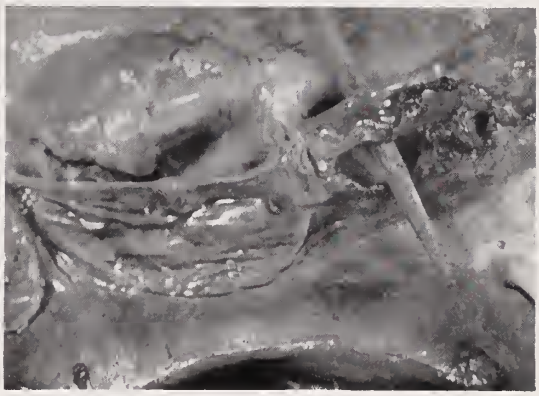


FIG. 1. Case 1. Perforation of aortic valve due to bacterial endocarditis.

On admission the temperature was 105°F, the pulse rate 96, and the blood pressure 160/50/10. The patient was acutely and critically ill. There was an obvious right hemiplegia. The fundi were normal. The lungs were clear. A grade 3 aortic diastolic murmur was heard, and slight cardiomegaly was noted. A small traumatic ulcer was present on the left foot.

The hematocrit was 36, and the white blood cell count 6,000. The urine contained 2+ albumin and 6 to

---

* Clinical Medical-Surgical Conferences are conducted weekly at the District of Columbia General Hospital by the Georgetown University Medical and Surgical Services.

† Fellow in Preventive Medicine and Public Health, Georgetown University School of Medicine.

15 red blood cells per high power field. The spinal fluid was under increased pressure and contained 210 white blood cells, of which 99 per cent were polymorphonuclear.

Cultures of blood, of cerebrospinal fluid and of the traumatic ulcer on the foot all yielded *Staphylococcus aureus*, which was coagulase positive and penicillin sensitive.

The patient was thought to have acute staphylococcal endocarditis, cerebral embolism and meningitis. He was treated with digitalis, oxygen and massive doses of penicillin and streptomycin. He remained in coma until the third hospital day, when he suddenly developed pulmonary edema and died.

At autopsy, there was found a vegetation on the aortic valve, with a sizable perforation in the valve (figure 1). The heart was dilated, and the lungs were wet. There was evidence of recent infarction of the left temporal and parietal lobes.

Case 2 was that of J. G., a 24-year-old Negro, who had been in excellent health and performing heavy labor until 7 days prior to admission on December 1, 1954. His illness began suddenly with malaise and aches in the knees, ankles and lower back. He continued to work for 2 days before rapidly increasing weakness and fatigability forced him to remain in bed. Cough productive of small amounts of whitish sputum developed 3 days later, and chills, fever and profuse sweating followed. The man denied all previous illness except for frequent colds and tonsillitis while in the armed forces. A tonsillectomy had been performed before his discharge from the Army in 1952.

The temperature was 103.4°F, the respiratory rate 24, and the blood pressure in the left arm 90/0, in the right 105/30. The pulse rate was 104, and the rhythm was irregular. The patient appeared well developed, muscular and acutely ill. The fundi and conjunctivae were normal. There were inspiratory and expiratory wheezes over the left lower lobe posteriorly. The heart was enlarged downward out to the left. A violent apex beat was palpable in the sixth intercostal space 10 cm. from the midsternal line. There were grade 2 systolic murmurs at the apex and the aortic area. A grade 3 aortic diastolic murmur and a Corrigan pulse were present. Questionable splinter hemorrhages were noted under the nails of the third finger of the right hand and the little finger of the left. Bilateral moderate pretibial edema was demonstrated. The prostate seemed tender on digital examination.

The admission hematocrit was 33. The white blood cell count was 23,000, of which 83 per cent were polymorphonuclear. The blood urea nitrogen was 39. The urine had a specific gravity of 1.024 and was normal except for occasional white blood cells, red blood cells and granular casts. Six blood cultures taken on admission were negative. The initial chest film showed a small pleural effusion on the right and slight cardiomegaly. An electrocardiogram demonstrated first and second degree A-V block and ventricular escape.

The patient was thought to have rheumatic heart disease with aortic insufficiency, active rheumatic fever, and bronchitis. Subacute bacterial endocarditis was to be ruled out.

On the second hospital day, fine rales appeared at the right base. On the third day the patient was more toxic and more dyspneic. The diastolic murmur was louder, and several new splinter hemorrhages were noted under the fingernails. Penicillin therapy was begun with 1,000,000 units being given every 2 hours, and digitalization was carried out. The patient, however, deteriorated rapidly, with increasing congestive failure and the appearance of new crops of splinter hemorrhages. A total of 18 blood cultures and 1 marrow culture were negative. On the eighth day there was a fatal attack of pulmonary edema.

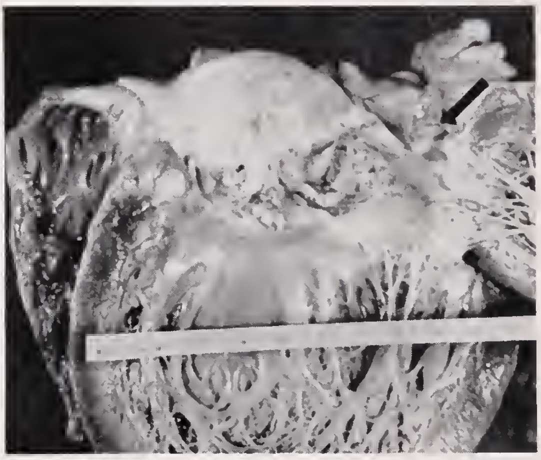


Fig. 2. Case 2. Small and large vegetations of aortic valve; perforation of left posterior cusp (arrow).

At autopsy several small vegetations and 1 large vegetation 2 cm. in diameter were present on the posterior aortic cusps, and the left posterior cusp was perforated (figure 2). There was underlying rheumatic valvular disease. An acute diffuse glomerulonephritis and multiple small renal and splenic infarcts were also present.

Gram-stained sections of the vegetation demonstrated Gram-positive cocci in clumps, but cultures grew *E. coli* which was thought to be a contaminant.

Case 3 was that of M. P., a 43-year-old Negress, who was admitted to the Hospital on November 23, 1954 after a 7-day illness characterized by fever, chills, sweats, cough and sputum. Four days prior to admission she developed right-sided pleuritic pain and referred shoulder pain. Her sputum became reddish. There was a questionable history of rheumatic fever (arthralgia) in childhood. On a prior admission a grade 2 aortic systolic murmur had been noted. She was known to be an alcoholic and to have portal cirrhosis.

The temperature was 101°F and the blood pressure 120/80. Signs of consolidation were present in the right lower lobe. The heart was slightly enlarged, and grade 2 aortic and mitral systolic murmurs were present (figure 3).

The liver was enlarged to 2 cm. below the right costal margin, and the spleen was palpable. The rest of the physical examination was negative. The sputum smear and the blood cultures taken on admission contained *Diplococcus pneumoniae.*

The diagnosis was pneumococcal pneumonia. Treatment was started with 600,000 units of procaine penicillin daily. On the third day the patient was confused and disoriented, and nuchal rigidity was present. A spinal puncture revealed fluid under increased pressure containing 900 white blood cells, the majority of which were polymorphonuclears. Cerebrospinal fluid cultures were negative for pneumococci. Pneumococcal meningitis was diagnosed, and the dosage of penicillin was increased to 12,000,000 units daily. She improved and became afebrile, but on the seventh day had an episode of pulmonary edema. During the next 2 weeks she had recurrent episodes of shortness of breath accompanied by apprehension that in retrospect might have been minor attacks of pulmonary edema. On the twentieth day her temperature rose and a right hemiparesis developed. An aortic diastolic murmur was noted about this time, and the diagnosis of pneumococcal endocarditis was made (figure 4). On the thirty-fifth day there was another episode of severe pulmonary edema. She was digitalized and again improved. The penicillin therapy remained unchanged. Blood cultures were persistently negative. On the fifty-sixth day she had an attack of pulmonary edema and died. A necropsy was not performed.

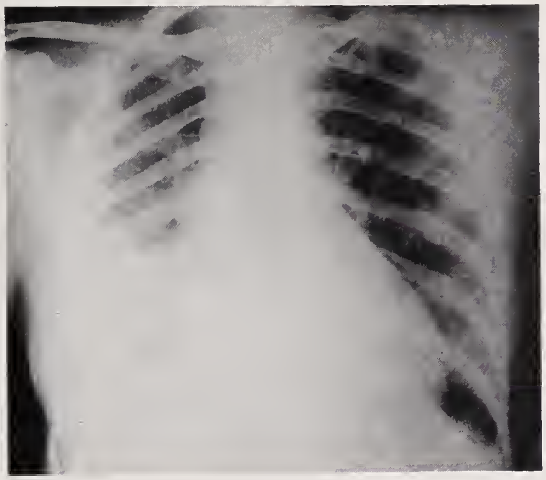


FIG. 3. Case 3. Lobar consolidation of right lower lobe due to pneumococcal pneumonia; slight cardiac enlargement.

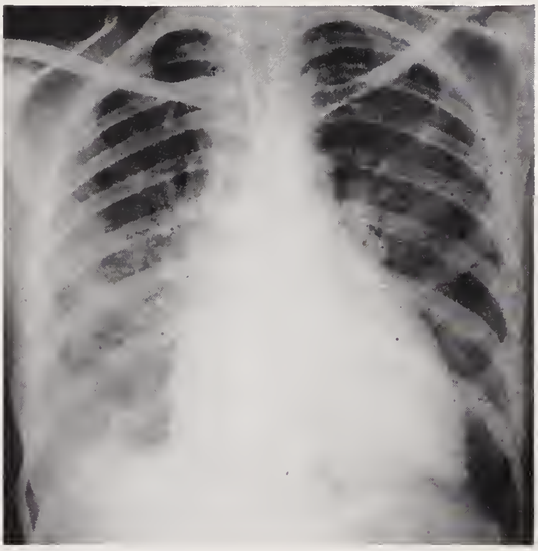


FIG. 4. Case 3. Clearing of lobar consolidation; heart size increased; aortic regurgitation now present.

Table 1 presents a summary of the findings in the 3 cases.

DR. HUSSEY: Clinically, the outstanding feature of the third case was the heart failure, particularly during the latter days of her life. A consultation was requested with the Surgical Service for the purpose of considering whether or not something should be done to relieve the load that had been imposed on the heart by aortic regurgitation. In retrospect, the same question might have been asked about the other 2 patients, although their courses did not so clearly present a need for the procedure. It is on this point, then, that our interest intersects with the surgeon's, but there are other aspects—medical for the most part—that I am sure Dr. Finland will want to discuss before we come to the answer of that surgical question.

DR. FINLAND: First of all, I want to compliment you for getting together a group of patients like this for one session. It really represents an unusual selection of 3 different types of cases which bear on the 1 point that you want to bring out here.

The first case is of interest for several reasons. We are now worried a good deal about the staphylococcus as a hospital infection, primarily because we are getting an increasing number of cases in which, after treatment with antibiotics for treatable infections or for infections which are presumed to be susceptible to the antibiotics we use, the patients end up with infections with a staphylococcus which is not susceptible. There is some question as to how widespread this difficulty with the staphylococcus is outside of large hospitals where intensive chemotherapy is used, and particularly where a large amount of chemotherapy is given for prophylaxis of respiratory infections, urinary tract infections, and so on. In the present instance I think the therapeutic problem was only a theoretical one, because it is doubtful whether there was enough time after the patient was received in the hospital to alter the course.

The question could be asked: If the patient had appeared in a hospital for his leg ulcer, might we have averted this phenomenon? Now, one can argue that if this were a resistant organism—resistant to all of our antibiotics—we might still have had this outcome. On the other hand, it is argued that outside of a hospital environment the organism probably would not have been resistant. At least the chances in some areas are 4 or 5 times as great of finding sensitive organisms outside the hospital. I suppose that were this a sensitive organism it would have been susceptible to treatment. The treatment would have immediately halted the bacteremic phase, or perhaps prevented the bacteremia, and we would not have been confronted with endocarditis.

TABLE 1

Comparison of the Three Cases

	Case 1	Case 2	Case 3
Past history of heart disease	Questionable hypertension	None	Possible rheumatic heart disease
Onset of aortic regurgitation	Prior to admission	Prior to admission	20th hospital day
Bacteriology	*Staph. aureus*	Staphylococcus	*Diplococcus pneumoniae*
Source of bacteremia	Traumatic ulcer on foot	?	Lung
Length of survival after onset of heart failure	24 hours	8 days	43 days
Cause of death	Massive cerebral infarct; heart failure due to perforation of aortic valve	Pulmonary edema; perforated aortic valve	Pulmonary edema; probable perforation of aortic valve

That same case brings out the fact that when endocarditis results from some of these coagulase-positive staphylococci we are contending with a very serious and highly fatal disease. Even when recognized early and intensively treated with appropriate antibiotics, these acute cases still show a very high mortality. Although the mortality in general from bacterial endocarditis due to a staphylococcus is 50 per cent, the survivals are more among the cases in which there seems to be a slower progression of the disease. In an acute, necrotizing and rapidly progressing type of endocarditis, the mortality is probably not influenced very much even when the organisms are susceptible.

Regarding the second case, it is not possible to touch on all the interesting features. The bacteriologic features are interesting and bring up questions that are important from a theoretical point of view. We have had many cases of patients who came into the hospital with susceptible organisms in their blood, in which treatment was administered, let us say, for a pneumococcal pneumonia with bacteremia, and in which within 12 to 18 hours the patient died and an autopsy was done. In spite of the fact that we were certain that the only causative organism of the disease for which the patient was brought into the hospital was the pneumococcus, at autopsy not 1 pneumococcus colony could be cultured even with the greatest care being taken to choose the best bacteriologic methods. And what did we find in those cases? We found an organism of the type discovered in the second case—almost any type of penicillin-resistant organism, including *Staphylococcus aureus*. *Aerobacter aerogenes* is another of the commonest. We find them in the cardiac blood, in the lungs, and in other tissues. How they get around so fast and replace what apparently was a predominant organism like the pneumococcus, I don't know. This to me is a very important phenomenon in the modern treatment of infectious diseases with antibiotics.

The third patient illustrates, first, the fact that you can eradicate the pneumococcus very rapidly, but it also shows that just infection is not the entire problem in the treatment of disease nowadays. The structural changes that take place during the period of infection preceding the modern eradicative therapy may be equally, and sometimes more, important. If there has already been enough damage to the endocardium so that, in the course of healing, there is much scarring and much valvular insufficiency, death will occur from heart failure. If there has been a sufficient amount of renal damage before treatment of subacute bacterial endocarditis, the patient may die of renal insufficiency. If there are large areas of vegetations, although the vegetations may be sterilized in some instances, the patient may still die from cerebral embolic phenomena.

It is well known, of course, that embolic phenomena can occur after an endocarditis is cured. We always hope that all such emboli will be small ones and sterile. As you know, during the first 3 months after blood cultures become negative in cases with bacterial endocarditis the patients may continue to have splinter hemorrhages. If one takes blood cultures, even using penicillinase in the blood culture medium, one cannot grow any organisms. We had 1 phenomenal case—one of the first patients to be cured of bacterial endocarditis—in which showers of petechiae recurred over a period of several years. This patient happened to be one of the first to get penicillin and later she worked for several years as a secretary. During that time she always would appear with splinter hemorrhages, but there was no fever nor positive blood cultures even after she had been off therapy a good many months. Finally she got used to seeing petechiae, and we got used to looking for evidence of recurrence of an infection. Fortunately, she didn't have any recurrences.

To return to the third case, here we have a pneumococcus, an organism that produces an erosive type of endocarditis. The infection was cured but the disease nevertheless progressed with respect to organ function, and the patient died of the functional results of the healed acute bacterial endocarditis.

DR. HUSSEY: I have a couple of questions. First, considering that this young woman you mentioned worked as a secretary and possibly had to carry a heavy load of typing, is it surprising that she got splinter hemorrhages under her finger nails?

DR. FINLAND: She also got petechiae in her eyes, but of course she did a lot of looking for them too.

DR. HUSSEY: The other question is a little more sensible. Sometime ago, when we had only sulfonamides for the treatment of pneumonia, we developed a kind of "rule of thumb" that never failed us. It was this: When a patient had only pneumococcal pneumonia when he was admitted to the hospital, was started on sulfonamide therapy and subsequently developed signs of pneumococcal meningitis, we could be sure that the patient had endocarditis as well. As I said, the rule never failed us. We have been postulating that the same rule would apply with the administration of penicillin. As far as I can recall, this is the first time that we've had a chance to test the rule with penicillin. I can't remember another case in which a patient having pneumococcal pneumonia with bacteremia was started on penicillin therapy and subsequently developed pneumococcal meningitis.

DR. FINLAND: I think the reason why this rule is not fulfilled is because when one treats a patient who has pneumonia and meningitis, the patient probably also has endocarditis at the time, but the treatment of that endocarditis is so early that the patient doesn't develop the full-blown picture of endocarditis. Also, meningitis does not develop in patients after they are adequately treated for pneumonia with penicillin or other effective antibiotics. If early meningitis is present when treatment is begun, the spinal fluid will rapidly become sterile. The only cases in which we have ever observed pneumococcal meningitis to develop during antibiotic therapy have been in patients treated with carbomycin.

The whole course of pneumococcal endocarditis, of course, may run to a fatal outcome without any observed change in cardiac murmurs. That is a well known phenomenon. This also means that some valves heal without damage sufficient to produce cardiac insufficiency. For instance, the lesion doesn't necessarily involve the margin of the valve. Vegetation may form on the mitral side of the aortic valve and spread toward the mitral valve. Those are common sites. There can be a lot of vegetations under the valve without actually causing a scar of the aortic valve.

DR. HUSSEY: Let me restate the question. The point that I want to clarify is this. We have had many patients admitted with pneumonia plus meningitis. But since the use of penicillin we have not seen what we used to see occasionally when we treated with sulfonamides, namely, a patient admitted with pneumonia, treatment started with penicillin, a lapse of several days and then, for the first time, signs of meningitis.

DR. FINLAND: Well, I should like to say that the patient under discussion probably had meningitis when she came in; she was not considered to have meningitis at the time of admission and therefore lumbar puncture was not done. I think that if you had done one, you would have demonstrated the meningitis. When the lumbar puncture was done, apparently somebody thought he saw organisms. I think he probably did see organisms and they could not be cultured because of the lapse of time after treatment had been started. In a patient with pneumococcal meningitis adequately treated with penicillin, if a spinal tap is done on admission, and another one the next day, and a third one later, the first specimen will have organisms that one can culture and see, the second will have organisms he can see and cannot culture, and the third specimen will not show bacteria by any technic. We have frequently had patients who came into the hospital and had not been thought to have meningitis. They were thought, for instance, to be alcoholics. Three or 4 days later when their alcoholic stupor did not seem to improve, somebody decided to do a lumbar puncture. Then he finds what you found here, namely, some organisms. Cultures may be negative because an effective antibiotic meanwhile has been given empirically.

DR. HUSSEY: We will give you a rest for a minute while Dr. Hufnagel discusses the surgical problem.

DR. HUFNAGEL: With the acute development of severe aortic insufficiency, one is confronted with an emergency problem in surgical therapy. In a sense, this is a new concept since, until recently, there has been no active or definitive treatment available. Now that we have a method that lessens the dynamic effect of aortic insufficiency, we can hope to stop the terrible progression of events that follow acute major deformities of the aortic valve. The method is another step in the development of a truly definitive treatment.

Acute rupture of an aortic cusp from trauma and the acute valvular damage produced by endocarditis in some instances are quite comparable. Obviously, in both the factor of myocardial disease, either coëxistent or preëxisting, must be taken into consideration. The classical prototype of acute rupture is that which occurs with trauma, because in most of these cases the myocardium is normal up to the time of the injury. From that time, under these conditions, one can study a course of the disease that is primarily on the basis of the mechanical lesion of the valve. Dr. Leonard has compiled the reported cases in the medical literature. He was prompted to do so primarily by a patient who came to us with a rupture of the aortic valve after being kicked by a horse, a relatively uncommon accident these days.

Obviously, when one is dealing with a valve damaged by a bacterial lesion, there are all grades of severity, from one that is minimal to one that is relatively maximal. So, with this lesion one must evaluate the individual case in terms of speed of development of serious signs. This variable picture contrasts with the one that develops as a result of acute trauma, in which extremely high pulse pressure develops immediately. This is never a minor lesion. It is always at least moderate and is usually quite severe. Dr. Leonard pointed out that it is unusual for a patient with traumatic rupture of a leaflet and free aortic insufficiency to survive for a period of much more than 9 months. Certainly, survival of over 18 months would be extremely unusual, and only a small group would survive into the latter portion of this period.

A similar clinical course is followed by a considerable group of patients who have a history of old rheumatic heart disease, who acquire endocarditis on the aortic valve (either acute or subacute), and who are treated and thereafter develop severe aortic regurgitation with a rapid progression of symptoms. Our experience with the surgical treatment of this lesion has been good. Often these patients have not had longstanding serious valvular lesions and myocardial damage. Consequently the patient tolerates operation well and gets an excellent result.

A word about the operation itself. As most of you know, we treat aortic insufficiency by inserting a prosthesis in the descending aorta. This plastic device does not entirely cure the aortic insufficiency, but it does favorably modify the effects of the insufficiency on left ventricular function by greatly reducing the work load.

We have not had the opportunity to operate on a patient very early after the development of aortic insufficiency due to endocarditis. Dr. Hussey has pointed out that the course is so rapid and the patient so ill that it is often difficult to decide whether or not something should be done. Since our experience has been relatively limited, the decision is even more difficult. The fact that severe aortic insufficiency has developed is perhaps an index that healing has taken place or is taking place, and since, with this particular procedure, we are not intervening directly at the aortic level, one would not be particularly influenced by anything other than the ability of the patient to tolerate the operation. Therefore, operative intervention should be seriously considered if the patient's condition appears to be deteriorating.

In any operation in which the heart or a major vessel is opened one should proceed as if the patient has subacute or acute bacterial endocarditis or endarteritis. At least this has been our presumption, and as a result of this we use what we call prophylactic doses of antibiotics. This means 5 to 6 million units of penicillin and a gram of streptomycin a day. On this type of program we've not seen the development of endocarditis or endarteritis subsequent to operation. In the period in which we were not using this regimen endocarditis or endarteritis developed in approximately 2 per cent of our patients. When endarteritis develops, for example, on the aorta following an operation for coarctation, I think that it is very uncommon for the patient to survive even with intensive treatment. The vegetative lesion involves the wall of the aorta itself, which has been subjected to the trauma of operation, and usually this goes on and involves a large segment of the aorta, with rupture.

In summary, I believe that in all patients who develop free aortic insufficiency acutely one should seriously consider operative intervention at an early date.

Dr. Hussey: As I understand it, we agree that a patient who suddenly develops free aortic regurgitation due to bacterial endocarditis should be considered for early operation. Perhaps Dr. James Leonard* may want to add something to the comments Dr. Hufnagel made in his behalf.

Dr. Leonard: As Dr. Hufnagel has pointed out, the biggest problem in selecting patients for insertion of a plastic aortic valve is, on one hand, trying to estimate the prognosis, and, on the other, trying to estimate the surgical mortality. In the presence of serious myocardial insufficiency the surgical mortality is very high. On the other hand, when a patient has minimal valvular difficulties and hasn't a defective myocardium to any extent as yet, the surgical mortality is low, but the prognosis is so variable that one doesn't know whether the patient is going to live 20 or 30 years without an operation. So then, what we would like to find is a group of patients who have severe valvular disease with no evidence of severe myocardial damage and in whom we know statistically that the prognosis is poor. This is exactly the situation in acute aortic insufficiency, because the patient's condition deteriorates rapidly.

The conditions that cause acute aortic insufficiency are traumatic rupture, turned cusp due to syphilitic aortitis, and sometimes bacterial endocarditis. The prognosis is fairly well known in free aortic insufficiency on a traumatic basis. Such patients don't live long; most of them are dead in a year. The same is true for patients whose right anterior cusp of the aortic valve turns during the course of syphilitic aortitis, and who develop sudden free insufficiency. When the aortic valve undergoes perforation or is deformed during acute or subacute bacterial endocarditis, the prognosis varies with the amount of damage done. However, it would seem that when the valve is perforated in the course of acute bacterial endocarditis, the condition is likely to be just as overwhelming and fulminating as if the valve had been torn by forceps. These people may die in severe pulmonary edema almost on the spot.

It would be good if we were able to prognosticate and say which people that develop aortic insufficiency during an endocarditis are going to develop a serious valve perforation or tear at a future date. In any event, when free aortic insufficiency does develop, even though heart failure may be temporarily compensated, consideration should be given to surgical insertion of a plastic valve as a prophylactic measure. Actually, these people are good candidates for the operation. They have a severe mechanical defect, little or no myocardial problem at the time, and yet an overwhelmingly poor prognosis.

Dr. Finland: We have seen patients who, early in the course of treatment of bacterial endocarditis, suddenly become dyspneic and in whom evidence of valve rupture is found. Those people die within a few hours. If this occurs early in the course of treatment, it might be very risky and perhaps impossible to try surgical treatment. But if this occurs after the cure of the infection and there has been enough time for healing, perhaps it would be ideal to perform an emergency operation similar to embolectomy when one knows that there is a sudden large pulmonary embolus.

---

* Resident, Pulmonary Disease Division, District of Columbia General Hospital.

Dr. Leonard: I doubt that a patient could survive operation at the height of pulmonary edema with all of the immediate consequences of that acute situation.

Dr. Hussey: Dr. Hufnagel, if mitral regurgitation developed suddenly as a part of endocarditis, would there be any indication for emergency surgery?

Dr. Hufnagel: The obvious answer is that the surgery of mitral insufficiency is not satisfactory. Many procedures are on the horizon, however, and I believe this is something we will have to consider in the very immediate future. Even today I could conceive of a situation that might justify consideration of surgical treatment of acute mitral insufficiency.

Dr. Robert Gilston*: Dr. Finland, please discuss the problem of bacterial endocarditis in which blood cultures are negative.

Dr. Finland: I think the data in the literature can be interpreted as indicating that the mortality with modern treatment is considerably higher in patients who have bacterial endocarditis with negative blood cultures than in those with positive blood cultures. There are various reasons for negative blood cultures. In the first place, the valve lesions in many of these are slower in developing and therefore cause more scarring. And it may be the scar over the bacterial colony that prevents the organisms from going out into the blood stream. In another group, we are dealing with artifactually negative blood cultures, that is, blood cultures that are negative because of inadequate treatment with antibiotics. It is well known that a subcurative dose of an antibiotic will nevertheless produce negative blood cultures for a long time. This is borne out by the fact that once one starts treating a patient and then stops, there may be positive blood cultures again after there had been negative blood cultures for several weeks or months, with the organisms apparently being the same as those originally isolated.

Whatever the reason for negative cultures, there is usually greater delay in arriving at the proper diagnosis. This undoubtedly accounts in part for the fact that the mortality is considerably higher in such cases.

How long should one keep trying to obtain positive cultures in a patient whose initial blood cultures are negative? It has been found that, if one takes several blood cultures in the first 48 hours and then keeps on taking them thereafter, the increment of positive cultures after the first 48 hours is less than 5 per cent and after 5 days less than 3 per cent. Therefore, from the point of view of treatment, it is usually not necessary to wait more than 48 hours before starting treatment. During that time, one takes not only multiple blood cultures but also blood cultures in different media in order to cover such organisms, for example, as Brucella, Bacterioides, various anaerobes, and perhaps some fungi. Once having done that, there is no object in waiting. One is justified in going ahead—not only justified, but impelled, especially in serious or rapidly developing cases, to go ahead and treat on the basis of the most common variety of organism, namely *Streptococcus viridans*, assuming that it may be moderately resistant. On that basis doses of penicillin are usually somewhat larger than those given a patient with a *Streptococcus viridans* that is highly susceptible. One assumes that it is moderately resistant, and the usual course would be about 10 million units of penicillin and 2 grams of streptomycin a day. Within a week or 2, if the patient's temperature does not respond, then one really becomes the doctor that just treats a patient, and himself, by floundering around and doing the best he can by trying various antibiotics. There are certain choices that precede others, but I think that actually one is just floundering when he tries to arrive at a combination of drugs that might do something the penicillin-streptomycin combination did not accomplish.

Dr. Hussey: Would you please enlarge on the matter of organism sensitivity?

---

* Chief Resident in Medicine, Georgetown Medical Division, District of Columbia General Hospital.

DR. FINLAND: Sensitivity tests are very helpful. But, let me digress for a moment to make it clear that I don't believe in doing sensitivity tests routinely for all bacteria, because one may get nowhere fast. One just floods the bacteriology department with work, and good sensitivity tests in those cases in which the tests are absolutely essential cannot be obtained. Sensitivity tests should be done only when the organism tested is likely to be the cause of the disease in the patient, and then only if it is a strain of a species in which the susceptibility among the different strains is known to show significant variations.

As it concerns bacterial endocarditis, I know of no disease in which it is more important to get the maximum help from the bacteriology laboratory. First of all, I would make a plea that a laboratory never throw away a culture in a case of bacterial endocarditis. One may want to do more sensitivity tests, trying combinations of drugs to see which is the most effective. Also, one may want to compare original cultures with the succeeding positive cultures to see whether the organism is the same or a similar organism and whether its susceptibility has changed. In those instances the test is very valuable.

In the case of a penicillin-resistant staphylococcus one has to depend upon the history of the particular hospital. In hospitals in which erythromycin has not been used very widely it is probably true that almost all, if not all, the organisms are still susceptible to erythromycin. In hospitals in which chloramphenicol has not been used very widely (as it has in some European hospitals where that drug has been used instead of the tetracycline antibiotics, which we have used more widely in this country) most staphylococci are still sensitive to chloramphenicol. In hospitals in which chloramphenicol is used routinely for many infections one may get a higher proportion of choramphenicol-resistant staphylococci. In our hospital, where erythromycin has not been used very much and now is almost never used alone, and where chloramphenicol has not been used very much except in very highly specific cases, such as typhoid or proteus infections, the only antibiotics that are effective against some staphylococci that we recover in the hospital are chloramphenicol and erythromycin. For the same reason, many of them are still sensitive to streptomycin, because the people on the wards, particularly the surgeons, had not been using streptomycin as freely as they had other antibiotics.

Early in our studies of erythromycin we demonstrated that staphylococci develop resistance to that antibiotic quite rapidly. So we made it a rule that erythromycin never be used alone, and, particularly, that it never be used with penicillin as the second antibiotic for an organism that is resistant to penicillin. Usually we have found the best combination for our staphylococci to be chloramphenicol and erythromycin. That is the combination that we use in almost all severe staphylococcal infections that are resistant to penicillin and the tetracyclines.

DR. DANIEL WEISS*: In reference to Dr. Finland's remarks about the disappearance of the pneumococcus under treatment and the appearance of some other organism at autopsy or later in the course of the disease, I wish he would say something about the effect of antibiotic treatment on bacterial variation. I have reference particularly to a recent case from the Georgetown Service of a Friedländer's pneumonia in which the Friedländer organism was consistently cultured during the early part of the disease. After therapy, *Aerobacter aerogenes* was cultured. The question came up as to whether or not this was actually the same organism under a new identity. In other words, the biochemical factors and the usual fermentations had changed under antibiotic therapy.

DR. FINLAND: That is a very important subject, and I wish I could give a definitive answer with respect to the Friedländer's bacillus specifically. We know that this sharp cleavage between *Klebsiella pneumoniae* and *Aerobacter aerogenes* is no longer considered as a major cleavage and that these organisms are now frequently grouped together in the Klebsiella-Aerogenes group. There are now almost as many serologic types within this group as among the Salmonella group. But, in relation to whether exposure to antibiotics changes the antigenic structure of some of these groups, I think there is a possibility that that does occur. The Friedländer strain that we have been using as a test strain for the assay of streptomycin concentrations was originally a type-A Friedländer's bacillus, and in the course of time, just by repeated subculture, it has lost its type specificity. One can get it back, as he can with the type specificity of a pneumococcus, by passing it through animals. Whether that means that there are still a few type-specific organisms that are most virulent and therefore come out, as perhaps is the case with a pneumococcus, or whether the opportunity for building up whatever it is that is responsible for the type specificity is actually enhanced, I do not know. Changes may occur in the organisms following exposure to antibiotics, and the closer they are to the antibiotics in their passage history, the more variations there may be.

---

* Chief Medical Officer in Pathology, District of Columbia General Hospital.

With the staphylococcus, one sometimes finds different forms, minute so-called G forms of staphylococci, in the blood of patients with bacterial endocarditis that has been treated with large doses of penicillin. However, these organisms are unstable and, once they are gotten out and cultured in the absence of the antibiotic, they revert largely to the normal forms. There were some observations suggesting that the coagulase production of staphylococcus was lost in the course of exposure to penicillin or to other antibiotics. Actually, the staphylococcus probably still has to have some penicillin adsorbed or still present perhaps as part of its structure in order to demonstrate an absence of coagulase production. When these same organisms are subcultured without antibiotic, they will again produce coagulase, and they will have the other properties of the virulent organism.

In brief, I think that variations occur. Some of them are transient; others may be permanent.

President's Page

HOSPITAL ACCREDITATION

Members of the Medical Society who follow closely the activities of the American Medical Association will recall that in June, 1955, the Association's House of Delegates authorized the Speaker to appoint a committee "to review the functions of the Joint Commission on Accreditation of Hospitals . . ." and ". . . to make an independent study or survey and report its findings and recommendations to the House of Delegates at the next annual meeting."

Physicians and hospitals, the House directed, should be asked to submit "any observations or suggestions concerning the functioning of the Joint Commission." As it was obviously impossible to contact physicians individually, the committee upon its appointment communicated with all state medical societies, requesting their coöperation.

Our Society, like other constituent bodies of the AMA, was requested to notify the membership of the existence of the committee and its survey. It was informed that the committee was especially interested in ascertaining the general understanding of physicians of the functions of the Joint Commission; whether the method of appeal from an adverse ruling regarding accreditation is satisfactory; the effect on the individual physician's hospital connections due to actions of the Joint Commission; whether any organization not now represented should have official representation on the Joint Commission; the effect of the Joint Commission's requirements concerning such matters as staff meetings; the pros and cons of separating administrative and professional accreditation functions in the inspection of hospitals; and constructive suggestions for improving the hospital accreditation programs.

The Society's Executive Board, at its meeting on December 12, 1955, voted to ask medical staffs of Washington hospitals to forward suggestions to proper officials of the Joint Commission. This was done and it is your President's hope that many constructive suggestions will be offered.

There has been a great deal of dissatisfaction with present requirements for the accreditation of hospitals, chiefly, it is charged, because some of them are unworkable, unfair, or unnecessarily burdensome. This is the time to review all facts so that the badly needed changes will be made with the least possible delay.

W. Ross Morris

Editorials

FAMILY DOCTORS TO ASSEMBLE IN WASHINGTON

Washington will be the focal point for an outstanding medical teaching program the third week of March, when the American Academy of General Practice holds its Eighth Annual Scientific Assembly at the National Guard Armory. The program committee of this large national organization has worked for 18 months to bring together a group of the best teaching talent in the country. Based on latest advance registration reports, nearly 5,000 general practitioners from every state in the Nation will be present for the sessions.

The program begins at noon on Monday, March 19, with a Panel Discussion on Disturbances and Distortions of Demeanor. The speakers will discuss the role of the physician in dealing with delinquents and such deviates as the psychopathic, habitual criminals, and addicts. The highlight on Tuesday will be an afternoon devoted to cardiology with a live clinic demonstration. The Wednesday program will consist of three panels, one, urological, another on vulvo-vaginal diseases, and the third on obstetrics. The final session, on Thursday morning, will feature another live clinic, this one to be presented by Dr. Josephine Buchanan of the D. C. General Hospital on "The Management of Disabling Diseases."

Other subjects to be covered, in smaller doses, during the week will include, among others, "Laboratory Aids in Fever Diagnosis," "External Ocular Diseases," "Primary Wound Repair," "Intestinal Parasites," "Thrombocytopenia," and "A Look at Tomorrow's Medicine."

The Academy has drawn heavily on Washington teaching talent for its program. In addition to Dr. Buchanan, the Baltimore and Washington areas will be represented by the following faculty members: Dr. Robert H. Barter (George Washington); Dr. Ivan L. Bennett, Jr. (Johns Hopkins); Dr. Robert H. Felix (NIH); Dr. Manfred Guttmacher (Supreme Bench of Baltimore); Dr. W. Proctor Harvey (Georgetown); Dr. Hugh Jewett (Johns Hopkins); Dr. Frank Kaltreider (University of Maryland); Dr. George Raines (Georgetown); Dr. Leonard A. Scheele (USPHS); and Dr. Grant Ward (Johns Hopkins). Other talented speakers will come from as far away as New Orleans, St. Louis, and Everett, Washington.

Equally important to the physician who wants to get a full measure of knowledge from these 4 days is the Scientific Exhibit Section. Of the 76 exhibits to be displayed, many will provide visual supplementation of the lecture program; a number of them were created specifically for this meeting. The scientific exhibits will be located on the lower level of the Armory, easily reached by two stairways, and any physician will be amply rewarded if he devotes several hours to their study. Members of the D. C. Medical Society who will be represented in the Scientific Exhibit are Drs. Lester S. Blumenthal, Philip A. Caulfield, Joseph F. Fazekas, Adolph A. Friedman, I. Phillips Frohman, James Q. Gant, Jr., Benjamin Manchester, Arthur A. Morris, Alfred J. Suraci, and Colonel Dwight M. Kuhns, MC, USA.

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.

THE CHANGE IN MEDICAL SERVICE

More flexibility and the possibility of broader coverage under the prepayment program of Medical Service is still an issue of great interest to physicians of this area, as was the proposal to increase income ceilings and fees.

A large majority of the ballots on the fee and ceiling changes are affirmative. It is important, however, for the physicians who are agreed in principle with the need to go ahead with the other phases of the Board's program to know as accurately as possible where they are going.

It is even more important for the minority, who for varied reasons are in opposition to at least some parts of the program, to know that their rights will be protected in its development. Especially for this latter group, but in appreciable measure for all, the Board must maintain an active information service.

In the present instance everyone should realize that the ballot authorization is just for the approval of specified changes in income ceilings and fees. All of the efforts of the past year to promote discussion of the broader objective have been largely to indicate to all physicians the thinking of their Board and in turn to give the Board the advantage of full public discussion of the matters for which the Board itself must work out the details.

The factual material and planned outline which accompanied the ballot may have stirred doubts in some minds, and may have resulted in more negative votes than the simple ballot alone would have produced. However, this is better than for contract details to emerge later as surprises to some who may have overlooked the previous communications. Also, the study and discussion and even the controversy which have ensued are all educational to the profession and helpful to the Board.

An outstanding fact is that a program such as the one proposed would expand the area of physician services and give reasonably good opportunity for administrative tailoring of contracts to match special group needs.

The major addition to the basic contract is the inclusion of in-hospital medical visits for 180 days beginning with the fourth day of hospitalization. This involves a single fee, that for the visit to the patient in the hospital. This fee presently exists at a figure which was developed by the Board for the pilot program which was approved by a mail ballot, August 13, 1952, with 90 per cent of votes favorable. This vote was taken after a period of committee and Board study, culminating in a discussion in a meeting of Participating Physicians called for this special purpose on July 29, 1952. Continuing information on this pilot study was included in the *Bulletin* for September 1953 and July 1954, as well as in a letter to all physicians in February, 1954. This part of the program has a long and detailed history and it has been intermittently under study for more than 3½ years. The original big question was on the actuarial safety of this program, but it has now been amply demonstrated to be financially safe for the Plan, as operated. Almost as significant as the new proposals is the negative aspect of the program which has to do with those things left out. The large omission in the present expansion plans is a provision to cover intensive medical care during the first three days of any hospitalization. This consideration was dropped after failure to obtain general support for it in preliminary discussions with the groups most concerned, although interest was expressed by some.

It is expected that within the general budget totals which have been authorized by the recent vote, that the Board, with proper consultations among the affected groups, will prepare a detailed fee schedule for physician consideration at the annual meeting in the spring. This schedule will contain the fee for in-hospital medical visits as modified from the present level, with special reference to the findings of the Medical Society survey. This in simple terms would be almost the total program for in-hospital medical care as contemplated under the basic coverage.

It is inevitable that an involved operation which depends on understanding by many people should meet minor obstructions and need frequent explanation.

For those questions which are still unanswered by Medical Service in the present situation, the rank and file of the profession will look to the diligence and competence, the honesty and sincerity of the Board to furnish the best available solutions. The vote which physicians have just given sets the stage for progress. The exact form of our future will be democratically decided as far as it is in our power to decide it.

Donald Stubbs, M.D.
President, Medical Service of the District of Columbia

JUVENILE DELINQUENCY

When environmental influences upon children are grossly unfavorable, it's easy to understand that those children may develop antisocial behavior. Those influences are undeniably the responsibilities of the adults, not the children, in our society. Thus, in articles about juvenile delinquency, the thought is often expressed that adults, not juveniles, are the delinquent ones.

That notion is quite acceptable to an adult—a respected, well-to-do member of the community—when he applies it to slum children who run in vandal gangs. He recognizes the obvious sociologic influences of those circumstances and, if he's a do-gooder, maybe he contributes time and money to correct the evil.

But what about the same adult, when he is brought face to face with the problem of vandalism in one of his own children? The chances are that he'll be at a loss to discover an unfavorable environmental influence outside the family. And the thought of something within the family is quite repugnant. After all, he thinks indignantly, the high reputation of the family in the community quite disproves a familial factor in the child's antisocial behavior.

However, Johnson and Burke[1] point out that, in apparently normal families of good reputation, a child may develop antisocial behavior as the result of a specific defect in the parent's own conscience regarding that aspect of behavior. The authors describe a number of examples to illustrate their meaning. For instance, there are:

1. The parent who tells the child it is wrong to steal, but who covers up for the child when he does commit a theft.
2. The parent who smugly practices little dishonesties with regard to short-changing tradesmen.
3. The parent who implies that stealing is all right in one kind of environment but not in another.
4. The parent who encourages an undersized 12-year-old to pay only half-rate at the movie.
5. The parent who writes illicit excuses for a child's absence from school and thereby impresses the child that "one's word" is of shallow significance.
6. The parent who displays an interested smile when telling of a child's vandalistic behavior.
7. The parent who accepts a flimsy story about where a child "found" the dollar or the new trinket.
8. The parent who says, "Do this, but don't tell so-and-so."
9. The parents who practice misguided "modern frankness" in their compulsive drive to make sex and bathroom functions an open book.

This analysis of reasons for juvenile delinquency supports the thought that treatment of a "delinquent" child entails intensive treatment of the parents as well as the child. For prevention, Johnson and Burke propose that knowledge of the origins of delinquency "be made widespread with the aim of erecting parental conscience barriers against the fostering of vicarious misbehavior. . . ." The authors admit that such knowledge may create some individual neuroses, but they accept this risk as a lesser evil. It seems psychiatrists find neuroses much easier to treat than the delinquency complex.

---

[1] Johnson, A. M., and Burke, E. C.: Proc. Staff Meet., Mayo Clin., 1955, **30**, 557.

H. H. H.

A HOBBY FOR PHYSICIANS

Everyone should have a hobby. Doctors give this advice to their middle-aged patients but don't always heed their own counsel. Many wait until ill health or retirement forces them to seek something to pass away the time.

While a hobby is, of course, a way to occupy one's time, it is really much more than that. A real hobby should be something positive, pursued for its own pleasure. It asks something of the hobbyist in that it challenges his imagination and demands attention. At the same time it gives the devotee an image of his true self. For a hobby is not something forced upon one by the necessity for making a living, or the need to conform with standard practices—or at least it shouldn't be. In the selection of a hobby one should, for once, do exactly what he wants to do.

To be completely accurate, one shouldn't speak of "selecting" a hobby any more than one should say that he "selects" his wife. It is probable that in the early phase of both relationships one exercises some choice, but thereafter it is simply a sort of pleasant drifting. Without having given much thought to it, and often without even realizing it, bingo! one suddenly finds he has a hobby (or a wife!).

Some hobbies require a certain amount of active physical exertion, as gardening, making furniture, or playing a muscial instrument. But note that there is much more to a hobby than muscular prowess and coördination; a hobby requires long-range planning, study and development. An active sport can be made a hobby, but to most who participate it is something less.

"Armchair" hobbies can be built about a place, an individual, an event, a thing, etc. Older physicians of Washington will recall how Dr. Francis R. Hagner, a distinguished urologist, made a hobby out of the assassination of Lincoln, searching out every bit of information connected with the principals of that tragic event. Stamps, sea shells, fashion prints, maps—almost anything can become the focus point of a hobby.

Sometimes the avocation almost overshadows the vocation in importance. I used to know a New York internist whose study of small mammals, based upon trapping expeditions all over the United States, brought him more recognition than did his practice.

Photography is one of the most popular of hobbies, and for many good reasons. A picture bridges the years, recalling past experiences and pleasures. The delight of a good picture can be shared with others, multiplying the satisfaction. The technics of picture-making are easily learned, and the cost can be very little.

Photography has so many different facets that no two hobbyists will follow precisely the same course. Starting with an inexpensive camera and black and white film, one can learn lighting, exposure factors, picture composition, and other basic principles. Excellent pictures can be made with the very simplest equipment, but if one becomes an enthusiast, and if he can afford the modest cost, he should purchase a 35 mm. camera and try his hand with the new color film. After experimenting with still pictures in color, many will turn to movie-making as offering greater challenge to the imagination. True perfection in moviemaking requires not only an understanding of all the elements of still photography, but skill in story-telling as well.

Others will find the quiet and isolation of the darkroom more to their liking and will turn to printing and enlarging. This can be lots of fun, even with black and white pictures. And for those who like to be on the frontier of things, kits are now available for processing color film and for making home prints and enlargements in full color.

Every hobby should have aspects suitable for all degrees of mental effort, and photography offers the complete range. When mental fatigue prevents concentration, there are always "moron jobs" that can be done—binding color slides, mounting prints in albums, framing enlargements, splicing movies, etc. For the hobbyist with truly surplus mental energy, there is the whole field of optics to be explored, involving the mathematics and physics of computing, grinding and cementing one's own lenses. Few will tackle this.

Even insomnia finds its reward in this hobby. The literature of photography is very broad and enlightening, and includes theory, materials, technics, history, etc.

There are always new vistas in photography, beckoning on to new delights. For the family man there is no more rewarding hobby, and the whole family will share his enthusiasm. Pictures combine well with other pleasures, such as travel, sailing, camping, hiking, etc. There is no end to its possibilities.

Photography has special attractions for the physician since this hobby will bring new pleasures to his professional life as well as to his leisure time. Skill in photography will make a good doctor a better one, because the camera will help him learn and help him teach, and thereby increase his professional stature.

But this aspect of a hobby is not the one that needs emphasis. The important thing is to have a stimulating diversion that offers a change from day-to-day routine. The earlier in life one gets at it, the sooner will he master it. With mastery comes the greater satisfaction and the opportunity to pursue each aspect into more rewarding and ever widening circles.

T. M. P.

In and Out of Focus

BY THE OBSERVER

"... Natural Allies ..."

There is evidence that medical and labor leaders are at last coming to the realization that much more is to be gained by conciliation than contention; that in fact, valuable time is being lost in ironing out the differences between the groups they represent. In the eyes of many observers this development is long overdue, especially in the light of social legislation enacted in recent years.

So-called fringe benefits are now an essential feature of union contracts. One of the most important of these is medical care. Guardians of union health and welfare funds in all parts of the country are therefore seeking to conclude arrangements with representatives of the medical profession to supply physicians' services on a mutually acceptable basis. A variety of arrangements have already been effected with Blue Shield plans, consumer medical groups, clinics and other organized medical services. In some instances an effort has been made by labor organizations to obtain a schedule of medical fees acceptable to both parties.

It would be unrealistic to suggest that differences between organized medicine and labor will be ironed out without the intrusion of suspicion, bitterness, and rancor; but the encouraging fact is that progress is being made. An example of this are the views expressed by Mr. David

Livingston,* Pesident of District 65, Retail, Wholesale and Department Store Union, CIO, guest speaker at a meeting of the Medical Society of the County of New York last November.

"Greater understanding between the medical profession and the great body of unions representing 20 million families," Mr. Livingston told his listeners, "has become an absolute necessity. And it is in the light of that fact that we particularly appreciate the opportunity to discuss with members of the medical societies our problems, our approaches, our aims and aspirations in the field of medical care.

"Actually labor and medicine are natural allies. We are two segments of society which have fundamental approaches in common. Both labor and medicine are, by their creeds, devoted to advancing the welfare of humanity. The history of each of us is replete with examples of self-sacrifice and self-denial in order to advance the common welfare. Despite these aims and attitudes which we have in common, relations between labor and medicine have often appeared to be strained. At best, we seemed indifferent to one another, and at worst, our relations were characterized by hostility. This hostility we believe arose from misconceptions and prejudices on both sides.

"Doctors and their organizations were led to believe that unions sought to regiment and exploit the medical profession. Doctors and their organizations were led to believe that labor in its activities in the field of health and welfare sought to control and dominate the relationship between doctor and patient. It was held that labor was a selfish minority seeking advantages at the expense of the rest of the population, holding on to fat treasuries and exploiting the medical profession. Perhaps the most widespread misconception which created hostility was the belief that labor is wedded to the so-called closed panel type of medicine and is indifferent and even opposed to free-choice medicine.

"On the other hand, we in labor were burdened with some misconceptions about the medical profession. We were told that doctors, and particularly doctors' organizations, were irretrievably identified with those forces in our society which opposed the growth and progress of the labor movement. It was suggested that if labor sought to provide medical care for its members, doctors would abuse such progress. It was suggested that members of unions who participate in such programs would be treated as clinic or charity patients and would not enjoy the same attention and care that private patients enjoy.

"We believe that our view of the medical profession was wrong and we also believe that the views of some sections of the profession about labor were equally wrong. It will, of course, take a lot of time to eliminate all the prejudices that each of us has. It will take more than time—it will take much mutual effort and rubbing of shoulders in the course of tackling problems together.

* * * * *

"The entire field is basically unexplored, and all of us, most of all myself, I think, can modestly admit that there are a great many questions that require answers; that our task is to search for the answers rather than to pretend that we know them."

Encouraging words indeed!

Although Washington is not an industrial city and therefore not unionized to the extent of some other metropolitan centers, there are still many health and welfare funds in existence in the Nation's Capital. Those responsible for them have in a few instances entered into an arrangement for the provision of medical and hospital care with Medical Service of the District of Columbia and Group Hospitalization, Inc.

Several months ago the Society was approached by a representative of one of the large unions who inquired if consideration would be given to the establishment of a fee schedule for union members. The committee of the Society considering this matter was reluctant to accede to the request because of its implications where all medical practice in the District was concerned. Previously the Society had coöperated with the above union in establishing a clinic for a very low income group.

This is, of course, just the beginning. The important thing is that the door be kept open for further discussions. In the months ahead efforts should and undoubtedly will be made to stimulate further progress toward the common objective, that of providing the best medical care for this segment of our population.

★

The President's Health

It is a far cry from the secretiveness which attended the illnesses of public figures of the past to the publicity given President Eisenhower's heart attack. To the credit of those charged with disseminating the facts, nothing of public interest was withheld. Especially deserving of commendation were the physicians in attendance on the President, whose statements were frank but in good taste.

---

* LIVINGSTON, D: New York Med., 1955, **11**, 918.

In the weeks which followed the onset of the President's illness, there was, naturally, wide public interest in his progress. As might have been expected, politics were soon projected into the situation and the question arose whether it would be possible for the President to seek a second term. The President's associates were persistently queried on this point and the minutest scrap of information was sufficient for a news story. Commentators were not slow in getting into the act. As a result, there was a deluge of interpretations, rumors and conjectures.

When it seemed that the weary reader was to be spared more of the same, someone came up with a new idea—why not survey the "medical experts" to determine their opinion of Mr. Eisenhower's physical ability to conduct the affairs of his office for another term?

Although readers of this column are undoubtedly familiar with the highly publicized survey, the facts might be briefly reviewed. The American Research Foundation, Princeton, N. J., queried 444 cardiologists listed in the Directory of Medical Specialists on the following questions: "(1) Do you think a man who has suffered a heart attack can be regarded as physically able to serve a term as President? (2) Based on what you have read about the nature of the President's illness, and assuming a normal convalescence in the next few months, do you think Mr. Eisenhower can be regarded as physically able to serve a second term?" Enclosed with the questionnaire was a self-addressed, air mail, special delivery envelope. No signature, it was stated, was required. No hint was given as to how the information would be used.

Surprisingly, 275 physicians returned the questionnaire, 141 stating their opinion that the President would be fit to run, 93 taking the negative position, and 169 abstaining from expressing an opinion. In one publication much was made of the fact that "3 out of 5 heart specialists" had said the President was physically able to run. Unimpressed, *The Washington Post* quipped, "The most significant conclusion to be drawn from this piece of research, as we see it, is that heart specialists tend to be Republican by a preponderance of about 3 to 2."

The Journal of the American Medical Association decried "consultation without examination" and suggested that the questionnaire "be tossed in the wastebasket." "It seems that the questions are very definitely slanted politically," the *Journal* observed. "If physicians answer them, the information could be used in almost any way to the disadvantage of the profession."

The *U. S. News and World Report*, which sponsored the survey, carried a detailed account of comments by physicians who responded. Not a few of those voting in the affirmative did so with qualifications. One qualified his "yes" with this: "If his doctor said so." Another said his "impression was based on a belief that the widely publicized facts included all pertinent data."

A physician who declined to answer the questions said, "It would be the height of presumption for me, or any physician, to express an opinion unless I had been in attendance. The President is in excellent hands and *only* his personal physicians have any *right* to express an opinion. Generalization about the results of coronary artery disease are both unwise and unwarranted. In my opinion your questionnaire is also unwise and unwarranted. No matter what the 'poll' shows it could not possibly have any bearing on any individual case."

Whether any Washington physicians replied to the questionnaire is not known. However, the few who were quoted anonymously in the Washington *Evening Star* leave the impression that the survey was not favorably received locally. Here are a few of their statements:

> "Obviously you were asked to pass judgment that he would be well."

"Of course, being the President of the United States is a more strenuous job than being the chairman of some board. But only the President's personal physician could answer these questions."

"This is an unjustified effort to get political slants. We have no data by reading to justify an opinion."

If the object of this poll was to provide reliable information about the state of the President's health, the result was, to say the least, questionable. One suspects that its real purpose was to capture the headlines. If so, it serves to emphasize the synthetic quality of what often passes for news.

★

Ambulance Sirens Periodically, various committees of the Society have vigorously discussed and occasionally denounced the speed and disturbance created by ambulances on emergency calls. Nothing has ever come of their deliberations, although from time to time individual physicians have expressed their disapproval.

Recently, a member of the Society's Traffic Committee spoke vigorously on the subject. He insisted that emergencies and certainly routine missions did not justify the speed of ambulances and the indiscriminate use of sirens. The former, he said, should be controlled and the latter eliminated. He pointed to the apprehension observed in patients because of the noise and confusion while being transported to hospitals and the hazard to pedestrians and to other vehicles. It was high time, he said, that action was taken by proper authorities. He thought that there should be a sampling of the opinion of the Society's membership. The Committee concurred and shortly thereafter a questionnaire was sent to all members.

The questionnaire aroused considerably more comment—some of it heated—than the Committee anticipated. A few members described it as "loaded," "ambiguous," "slanted," and so on. However, 471 physicians answered the questions with the following results:

1. Do you think that sirens and excessive speed in ambulances are needed as a life-saving measure?
   Yes 16% No 71% Qualified 11% No answer 1%
2. If answer to number 1 is "Yes," how many cases do you know in which a life has been saved?
   29 stated that they knew of 1 to 15 cases.
   Because of an error in preparing the questionnaire, "Yes" and "No" answers were indicated. The following response shows the resulting confusion:
   Yes 12% No 10% Qualified 4% No answer 74%
3. Do you think that sirens and excessive speed of ambulances are generally unnecessary and a hazard to patients and the public?
   Yes 82% No 11% Qualified 3% No answer 4%
4. If the answer to number 3 is "Yes," please comment.
   Samples: "I can think of only one condition in which speed is necessary and that is in case of hemorrhage. Such a situation is usually after an accident or an injury which occurs in situations that the police would be called and could give escort."
   "The overwhelming majority of cases are not influenced by the five or ten minutes of time required and the speed and noise which would increase the anxiety of patients."
   "How else would an ambulance get through some of the rush-hour traffic in D. C. without unnecessary delay unless equipped with sirens?"
   "Speed and siren to be determined by severity and emergency of individual cases indicated by physician."
5. Which of the below plans would you favor?
   Abolish sirens—22%
   Retain sirens—54%
   Require adherence to law—51%
   Other—24%
   The latter made several editorial comments, a number of them expressing the belief that sirens and excessive speed should be restricted to actual emergencies.
   A number of the physicians who replied checked more than one of the above, therefore the discrepancy in percentages shown; in other words, the total is more than 100 per cent.

Whatever the merits of the questionnaire and the results which were obtained, it is evident that a majority of those who responded thought that sirens on the ambulances should be retained. A slightly smaller percentage were of the opinion that ambulances should adhere to traffic regulations.

In a communication addressed to the Society, Dr. Daniel L. Seckinger, Director of Health for the District of Columbia, took cognizance of the Committee's questionnaire. He wrote the Secretary that he "realizes a certain amount of risk is inherent in any emergency service but this has been minimized by our present administrative regulations. Our drivers are instructed to use sirens and utilize emergency traffic regulations only when necessary. The ambulance interns are responsible for instructing the drivers as to what is necessary in relation to the condition of the patient. Our administrative regulations limit the drivers to a 35-mile-per-hour speed and they are required to slow down when approaching intersections controlled by a red light until they are certain that the intersection is clear.

"We would like to emphasize the fact that without siren protection and adhering to an ordinary traffic movement and regulations, it would be necessary to proceed slowly regardless of the critical condition of the patient."

At a meeting of the Traffic Committee on December 22, 1955, attended by Dr. Frederick Heath, Deputy Director of Health for the District, Mr. David Frye, Hospital Operations Officer, D. C. Health Department, and Dr. Milton C. Cobey, Chairman of the Trauma Committee of the American College of Surgeons, results of the opinion poll were discussed. Dr. Heath reiterated Dr. Seckinger's views, stating that he could give many examples of the critical condition of patients on arrival at D. C. General Hospital where delay caused by ambulances observing normal traffic regulations would have resulted in needless loss of life. He emphasized the fact that ambulances in the District of Columbia had been driven 65,790 accident-free miles in the past 4½ months.

The Chairman of the Committee, Dr. Herbert S. Gates, questioned the need for speed, stating that he had followed ambulances in a few instances and had arrived at the hospital within a few minutes of their arrival. He, therefore, saw no reason for permitting ambulances to run at high speed with sirens wide open in any but rush hours when the traffic was unusually heavy.

The Committee's final conclusion was to submit its findings to the Executive Board, which, at the time this is written, had not had an opportunity to review them.

* * *

Athletic Injuries

From time to time protests are heard that competitive sports are unnecessarily hazardous. However, a sports-loving public has shown little concern. Passing sympathy for the unfortunate competitor is quickly forgotten in the enthusiasm for another spectacular sports event. In other words, it is a case of "out of sight, out of mind."

Is this a fair estimate of the situation? As the late Al Smith said, "Let us look at the record." The facts here presented appear in the *Scope Weekly* published by the Upjohn Company, which made its initial appearance on January 2. The *Scope* offers the following evidence:

> There are more than 20 football fatalities a year in the United States.
>
> Neither football nor boxing contributes to the highest number of fatalities. Statistics cited by Dr. Thomas A. Gonzales, Chief Medical Examiner in New York City show that during the 33-year period from 1918 to 1950, 43 young men were killed in baseball. The cause was often a skull fracture from a blow on the head by the ball. During the same period there were 22 football deaths, 21 boxing deaths, 7 in basketball and 11 in other sports, or a total of 104.

Dr. Augustus Thorndike, veteran physician at Harvard University, is quoted as the authority for the following record of injuries in all sports at Harvard from 1932 to 1947:

Sprains	1,272
Strains	746
Joint contusions	379
Muscle contusions	987
Simple concussions	477
Fractures and dislocations	560
Lacerations and abrasions	378

Inflammation and infections	497
Internal injuries	222
Miscellaneous	462
	5,980

As to the sites of fractures during the same period, they were as follows:

Fingers and hands	163
Face	86
Wrist	41
Leg	41
Foot	33
Vertebral processes	23
Shoulder (acromion, clavicle)	18
Ankle	15
Ribs	15
Forearm	7
Elbow	6
Upper arm	4
Skull	2
Sternum	1
	455

It is hardly fair to say that those who supervise or promote competitive sports have not made an effort to protect participants against serious injury. "Better protective gear," *Scope* states, "is preventing accidents on the playing field, or making them less serious. Considerable research and engineering talent have produced improved helmets of various types. Major league baseball players now wear a special device under their caps as insurance against the bean ball. Modern football helmets afford better protection to the skull than those of 20 years ago. Scientifically constructed nose and mouth guards help too. High school players are now beginning to use them.

"Yet the frequency of injury in sports has apparently been constant. . . ."

Team doctors have made important contributions to the safety of athletes by insisting on preseason physical examinations and prompt attention and often removal of an injured player. On this point, Dr. Frank Glassman, formerly physician for the Chicago Cardinals, professional football team, observes, "I am of the considered opinion that those players in the best condition sustain a minimum of injuries and those who 'goof off' sustain the maximum injury."

Another physician states it this way: "The major problem is to keep the boys off the field when they've been hurt. But if every injury were treated conservatively, there wouldn't be many boys playing football."

That is perhaps the answer. Remove all the dangers in competitive sports and it would no longer be the thrilling spectacle it now is Nevertheless, the fact remains that youths who participate in athletics should be afforded every possible protection.

★

A Toast in Reverse

Recently, in one of his reflective moods, your Observer recalled one of the memorable events in his medical experience. It occurred during the Annual Meeting of the American Medical Association in June, 1930. Through fortuitous circumstance he was privileged to attend the President's Dinner given by the Michigan State Medical Society. Guests of honor were the Past Presidents of the American Medical Association. Among them were such famed medical figures as Drs. Frank Billings, William J. and Charles H. Mayo, William H. Welch and Ray Lyman Wilbur. The President-elect of the Association at the time was Washington's Dr. William Gerry Morgan.

The program consisted of talks by the Past Presidents, each of whom spoke briefly to the toast—"What Most Influenced My Life." To a neophyte it was an exciting prospect to see, let alone hear, such distinguished physicians. Their reminiscences of the influences that shaped their lives, your Observer will never forget.

As he ruminated on this recollection, it occurred to him that the toast might well be reversed for the purposes of comments which he has had in mind for some time. He would entitle it, "The Influence of a Dedicated Physician on His Community." Many examples of this occurred to him, but there was one that stood out from the rest.

Some 50 years ago, a 22-year-old physician established a practice in a small village in the lake region of Northern Wisconsin. He had just finished his internship and was eager to try his wings. The community which he chose, it seemed to him, held great promise. What impressed him most was its newness and the youthfulness of its people. Then, too, the surrounding area was agriculturally attractive to venturesome pioneers.

What this young doctor lacked in experience he compensated for by his deep devotion to his profession. Early in his career he decided he would not be content with being average. He resolved to keep abreast of medical progress and to become the best physician possible.

At or about the time he began practice, he entered into a partnership with an older physician with whom he had attended medical school. They built a modest but attractive building in which they had their offices and a few beds for patients requiring hospitalization. Although theirs was a general practice, the doctor in this story came to the conclusion that it would be possible for him, if he did postgraduate work, to do general surgery. But this was more readily said than done. After all, he had to make a living and there were the expenses and time required to get to centers where he could obtain the desired training. However, he was not daunted by these obstacles and at every opportunity he left his practice to his associate for the duration of the training period.

Eventually the partnership's practice grew to a point where it was decided to enlarge their building in order to provide the most modern facilities available at that time for their patients. It was thought that the psychological effect of this on the patients would be to increase their confidence in the abilities of these physicians. However, it soon developed that there was a long struggle ahead. Whether they wished it or not, this doctor and his associate were, in the minds of the majority of the people, "country doctors." To obtain medical service as serious to them as surgery, the thing to do was to "go to the city" where there were specialists.

Fortunately, the doctor of these recollections was a man with a personality and gifts of large dimensions. It required time, but eventually these qualities were recognized not only in the community but throughout the whole area. Wherever there was small talk, whether in the country farmhouse or in the village itself, his many talents were frequently the subject of discussion. Commented on were his insatiable curiosity not only in matters that related directly to his profession but in many other fields; his keen powers of observation; a robust sense of humor; and a gift for narrative.

As his reputation grew, so did the establishment he and his associate had founded. A third doctor was employed and then another. Space was not sufficient for the needs of the group so an addition was added. Finally, a modern community hospital, surprising for a small community of its size, was erected, which belongs to the people themselves.

The doctor has taken a great pride in the little community where he still lives. Whenever improvements are needed he is out in front. In fact, nearly all of them bear the touch of his imagination. An example of his devotion to his community was the erection of a typically English countryside church. It was planned, financed, and completed under his leadership. Incidentally, it has attracted statewide interest because no detail has been overlooked in making it what it is supposed to be.

Until the 1920's the state medical society was not too important a factor in the lives of the physicians in this distant rural area. However, it was not long until the organization had heard about the doctor and he was soon to become an active worker. It culminated in his becoming president of the state medical society. Recognition was also given him by the Governor of Wisconsin, who appointed him one of the Regents of the State University.

With all the honors that have come to him, this man is still the country doctor, albeit one of the most versatile and successful in the state. What do his patients think of him? He has the affection and confidence of literally hundreds of families, many of whom he has cared for for generations.

This, then, is a salute to a distinguished physician and a citizen who has left a lasting impact on his community! Dr. Raymond G. Arveson, the physician in this story, still lives in the small town, Frederic, Wisconsin (population less than 1,000), where he began practice so many years ago. His career emphasizes the fact that no matter where the physician decides to practice, whether it be a city such as Washington or a village in a remote rural area, his opportunities are limited only by his vision, a deep desire to serve the people who require his ministrations, and an unflagging interest in his community.

P.S. The doctor of this tale introduced your Observer to the medical field. The year—never mind!

T. W.

THE JUNIOR CHAMBER OF COMMERCE

The Junior Chamber of Commerce is one of many service organizations in Washington devoted entirely to promoting and backing various civic, educational and charitable projects, many of which are closely related to medicine. The organization is composed of young business men, lawyers, and other professional men, all under 35 years of age.

The JCC sponsors, directs, and raises money for such projects as an Annual Crippled Children's Boatride, a Teen-age Driving Road-E-O, a Handicap Hobby Fair (to provide an outlet for the handicapped to sell and display their work), and an Orphans' Christmas Shopping Tour. They sponsor awards for civic service; e.g., 10 outstanding young men in Government are cited each year. Among projects to promote American ideals are awards to exemplary teen-agers and the Voice of Democracy Essay Contests. In the past they have acquainted citizens with the findings of the Hoover Commission; they also initiate newspaper publicity on fire prevention, Potomac River pollution, and traffic and safety problems. There is a special committee always ready to function in case of disaster.

Multiple athletic contests are sponsored: the Nation-wide Fishing Rodeo, a basketball league, Junior Golf and Tennis, the Walter Johnson Baseball League, a Boy Scout Troop, and the Olympic Fund Drive. Some of these projects have medical aspects and thus are of interest to doctors.

A facet of the Junior Chamber of Commerce's work which ties in closest with the Medical Society of the District of Columbia is the sponsoring every March of Community Health Week. This is a Nation-wide project, co-sponsored by the National Health Council, to focus the attention of the public, by means of the press, radio, and television, on the health facilities available in their areas. The Health Committee is assigned to work with the various health agencies in the District of Columbia and with the Medical Society to carry out this project in the Nation's Capital. Last year, under the slogan, "Know Your Community Health Resources," the JCC's Health Committee was responsible for over 50 press, radio and television programs, along with providing speakers to various civic organizations.

This year, from March 18 through 24, the Junior Chamber of Commerce is again sponsoring Community Health Week. Once again it is calling upon the Medical Society for help. The active support of each member of the Society will be solicited and greatly appreciated.

Next year it is the hope of the JCC to sponsor jointly with the Medical Society and the Washington Board of Trade the National Health Fair. This greatly expanded project will bring together under one roof, in exhibit form, the health resources not only of the Washington Metropolitan Area but of the country. This is a tremendous undertaking, but it should make any community more health-conscious.

As outlined above, the Junior Chamber of Commerce attempts to promote and stimulate many civic interests, some indirectly and others directly related to public health. All of them are undertaken in the spirit of the Jaycee Creed, which reads:

"We believe:
That faith in God gives meaning and purpose to human life;
That the brotherhood of man transcends the sovereignty of nations;
That economic justice can best be won by free men through free enterprise;
That the government should be of laws rather than men;
That earth's great treasure lies in human personality;
And that service to humanity is the best work of life."

Committee work this year is handled under the directorship of Joe Koach, President, and Gerald Stanton, Vice President, of the JCC. Robert Hoffman is Director of Civic Affairs. Individual work in television, radio, newspapers, etc., is delegated to members who are employed in those fields. Drs. William H. Cooper and William P. McKelway will again serve as Co-chairmen of Community Health Week, with the assistance of Miss Josephine J. Albrecht, of the United Community Services, as Secretary-Coördinator.

KOBER LECTURER FOR 1956

It is particularly fitting that Dr. Harry S. Bernton should have been selected by the Executive Board of the Medical Society of the District of Columbia to give the Kober Lecture this year. In 1929, when Dr. George M. Kober was made Emeritus Professor of Hygiene and Preventive Medicine of Georgetown University School of Medicine, Dr. Bernton was named his successor.

The Kober Lecture will be given, March 21, in Gaston Hall at Georgetown Medical Center, where Dr. Kober, who endowed the Kober Lecture, was Dean for many years. Dr. Bernton, who has made his greatest contribution to medicine in the field of allergy, will give an address on "The Clinical and Biochemical Aspects of Allergy."

Dr. Bernton has contributed to the literature a number of articles pertaining to public health, pathology, and especially to allergy. As first incumbent of the office of pathologist to the State Board of Health of Rhode Island (1914–18), he introduced the typing of pneumococci as an additional laboratory service to the physicians of that state. For a published account of this procedure he was awarded the Fisk Prize in 1919 by the Rhode Island Medical Society.

Dr. Bernton has been associated with the Allergens Research Division of the U. S. Department of Agriculture as its Clinical Specialist in Allergy since its organization in 1935. The Division has been responsible for much original work and a number of significant contributions to the field of allergy. In 1949 this Division was awarded a citation by the Secretary of Agriculture.

HARRY S. BERNTON, M.D.
Kober Lecturer for 1956

CAT.

Dr. Bernton is a graduate of the Harvard Medical School (1908). During his undergraduate days at Harvard College he was a classmate of the late President Franklin D. Roosevelt. In 1918 Dr. Bernton came to Washington to accept the position of Chief of the Bureau of Preventable Diseases and Director of the Biological Laboratories of the D. C. Health Department. The same year he was commissioned Lieutenant (s.g.) in the U. S. Naval Medical Reserve Corps and appointed laboratorian of the U. S. Naval Base Hospital No. 27. This unit, although mobilized, was not called into active service because of the War's ending. Since 1923 Dr. Bernton has been engaged in the private practice of allergy. His offices are at 1925 Eye Street, N.W.

He has served on the faculties of George Washington University, Georgetown University, and Howard University Schools of Medicine. At Georgetown University Schools of Medicine and Dentistry he has been, successively, Assistant Professor and Professor of Hygiene and Preventive Medicine. Altogether, he served Georgetown from 1918 to 1951, when he was made Professor Emeritus of Hygiene and Preventive Medicine. He is allergist to Providence, Freedmen's, and Doctors Hospitals.

In 1928 Dr. Bernton was President of the American Association for the Study of Asthma, the parent body of the American Academy of Allergy. He is a Fellow, and during the past three years has been a member of the Board of Trustees, of the American College of Allergy. He is a Fellow of the American College of Physicians and the American Academy of Allergy, and a member of the American Association of Bacteriologists and Pathologists, the American Bacteriological Society, the American Medical Association, the Southern Medical Association, the Biological Society of Washington, and the Washington Academy of Sciences. He is also a member of the Cosmos Club and the National Press Club.

Dr. Bernton has been an Active member of the Medical Society of the District of Columbia since 1919. He has served on the Society's Executive Committee (now known as the Executive Board) and on several other committees. Quite a number of his articles have appeared in the MEDICAL ANNALS. It is hoped that the Medical Society will be well represented when Dr. Bernton appears as the Kober Lecturer, March 21.

MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, January 23, 1956, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Josephine J. Buchanan, 5806 Franklin Avenue, Falls Church, Va.
Stewart W. Bush, 901 23rd Street, N. W.
Charles W. Clark, 717 Florida Avenue, N.W.
Claude L. Cowan, 1428 Irving Street, N.E.
Lena F. Edwards, 27 15th Street, S.E.
C. Richard A. Gilbert, 1801 K Street, N.W.
William Richard Hyde, 2917 Georgia Avenue, N.W.
Bernard J. Michela, Georgetown University Hospital
James E. Roberts, 1209 Que Street, N.W.
Willie L. Statom, 1442 Independence Avenue, S.E.
Francis N. Waldrop, 8316 Cool Spring Lane, Adelphi, Md.

Associate Members

Theodore H. Chuang, 1711 New York Avenue, N. W.
Juliana Day, 8207 Grubb Road, Silver Spring, Md.
George Labarraque, 4114 Davis Place, N.W.
James J. Leonard, 2713 39th Street, S.E.
Robert E. Smith, Jr., D.D.S., 1712 16th Street, N.W.
Hsiang Len Tseng, St. Elizabeths Hospital

Affiliate Member

Henry T. Kulesher, 716 E. Broad Street, Falls Church, Va.

The following applicants for membership will be voted on at the meeting of the Executive Board, March 26, 1956.

For Active Membership

William Louis Amoroso, Jr., George Washington University—1945
Paul B. Bender, Georgetown University—1946
Lewis H. Biben, Hahnemann Medical College—1949
Robert P. Crawford, Howard University—1944
John S. Harrington, Georgetown University—1950
Bernard A. Harrison, George Washington University—1948
Robert S. Jason, Howard University—1928
Charleen G. Kirkpatrick, Woman's Medical College of Pennsylvania—1954
Creed F. McFall, Jr., George Washington University—1948
Herbert A. Tuck, Tufts College Medical School—1938
David H. Weaver, Howard University—1952
B. Edward Wyman, College of Medical Evangelists, Loma Linda, Calif.—1954

For Associate Membership

Stewart T. Ginsberg, University of Minnesota—1933
Mark H. Lane, University of Vermont—1954
Leon R. Levitsky, George Washington University—1953
Edward K. Pearson, Georgetown University—1952
John C. Rose, Georgetown University—1950
Henry Turkel, University of Michigan—1936
Leslie Upton, Middlesex University—1942

For Resident-Intern Membership

Joseph Kayle Perloff, Louisiana State University—1951
Jonas B. Robitscher, Jr., George Washington University—1955

THE ADMINISTRATION'S ACTIVITIES IN HEALTH*

THE HONORABLE ROSWELL B. PERKINS

Assistant Secretary, United States Department of Health, Education, and Welfare

The medical profession, for all the hammering it has occasionally taken in public debate—for which this fair city has been a major forum—still holds and always will hold a place of the highest esteem in the public mind. This is as it should be.

I have even heard it argued that the medical profession is the oldest one. However, I suspect the lie has been given to this bit of pleasant mythology by the story of the doctor, the engineer and the Government official who were arguing the issue of the relative antiquity of their respective professions. The doctor offered in evidence the fact that only a surgeon could have removed Adam's rib as cleanly as the job appears to have been done. The engineer countered with the proposition that, prior to this surgical feat, in order that there could even be a Garden of Eden, it must have been an engineer who created order and beauty out of the preëxisting chaos. But at this point the Government official cleared his oratorical throat and proclaimed: "My friends, you are clearly both wrong. For who in the name of Heaven do you think created all the chaos!"

The fact that this little parable was told to me by the President of the AMA may or may not have any special significance. In any event, I shall seek to demonstrate this noon that the creation of chaos is not among the objectives of the Department of Health, Education, and Welfare in the field of health.

Our over-all objective is, of course, better health for the American people; indeed, it is a cardinal goal of this Administration. Manifestations of the President's keen interest in improving the health of our people lie in his special messages to the Congress in both 1954 and 1955 on our health needs, and the comprehensive health programs he transmitted to the Congress in each of those years, in terms of both legislation and appropriations requests. The special conference on the physical fitness of our youth—which would have taken place in Denver but for the President's illness—is a recent example of his constant effort to find the facts, to plan, and then to act to improve the health of our citizens.

Clearly, one of the most important advances which the President has achieved in the field of health, from the long-range viewpoint, has been the creation of the Department of Health, Education, and Welfare. Each of the units within the Department has a real responsibility for health.

The broad functions of the Public Health Service, of the Office of Vocational Rehabilitation, and of the Food and Drug Administration are fairly widely known. In addition, the Social Security Administration, through the Children's Bureau and the Bureau of Public Assistance, and the Office of Education, through its school health activities, are intimately concerned with health problems. You may not be aware of the further facts that St. Elizabeths Hospital and Freedmen's Hospital are units of our Department, and that we have special relationships with Howard University, including its medical school.

Of course, the Public Health Service is our largest health unit. It has no less than 1,385 physicians on active duty. You are undoubtedly well acquainted with many of your colleagues in the Public Health Service, and know personally or by reputation its distinguished Surgeon General, Dr. Leonard A. Scheele. You know that these individuals are men of medicine of the highest type.

A key job in the Department is the position of Special Assistant to the Secretary for Health and Medical Affairs. This position was created to give the Secretary the continuing counsel of a top-flight doctor who is not a career official. The wisdom of having such a position has perhaps been best demonstrated to us by the invaluable contributions of the individual who recently vacated the post upon his elevation to Director of Medical Affairs at Boston University, Dr. Chester S. Keefer. Secretary Folsom is now in the unenviable position of seeking a replacement of Dr. Keefer's stature.

Your gathering happens to be a meeting of an organized medical society; and you may well be asking yourselves how we keep in touch with the thinking of professional medical organizations. Of course, physicians in the Department are generally members of those organizations, and so rapport should be no problem. In addition, the Secretary and his staff have met frequently and recently with the elected officials of organized medicine. Also, there are periodic meetings with the officially designated Liaison Committee of the American Medical Association and other official bodies of that organization. This pattern is, of course, similar to that which prevails with respect to other organizations which are intimately involved in the Department's activities. I should add that the Secretary sometimes calls in doctors, either individually or in a small group, to get their personal views, without regard to their organizational affiliation.

---

* Delivered at the Georgetown University Medical Alumni Luncheon during the 25th Annual Scientific Assembly of The Medical Society of the District of Columbia, October 12, 1955.

In brief, I assure you that we are in no danger of being isolated from the thinking of organized medicine or of individual doctors.

MAJOR OBJECTIVES

Coming to my primary subject: What does the Department do to promote better health?

From the layman's viewpoint, I have analyzed our activities as falling within five major objectives. These objectives are:

1. To gain new knowledge;
2. To help support basic public health services to the people as a whole, supplementing the services provided by individual physicians;
3. To help maintain and increase the supply of trained health personnel;
4. To help increase the availability of physical facilities for health purposes; and
5. To help enable individuals and their families to meet the costs of medical care as they arise.

I should like to give you the briefest thumbnail sketch of our activities and thinking in each of these areas.

MEDICAL RESEARCH

First, as to gaining new knowledge. As you may not know—I certainly did not—nearly half of the medical research in this country is being paid for by the Federal Government. The largest share of this Federal support is provided through an arm of the Public Health Service, the National Institutes of Health. The NIH funds for medical research have increased from $8 million a year in 1946 to $97½ million in the current year. These funds have been increased by over 60 per cent in the last 3 years. Of the $97½ million sum, NIH will distribute two-thirds for research grants and research training in outside institutions. The other one-third will be spent in so-called "intra-mural" research, largely at the research plant in Bethesda, with which you are all familiar.

At the request of the former Secretary of the Department, the National Science Foundation has undertaken, through an ad hoc committee of eminent physicians, scientists and educators, to review the current medical research programs of our Department from the viewpoint of objectives, achievements, and their future role. Their report, expected late this year, should provide helpful policy guidance.

The areas of research to be emphasized are increasingly those of chronic disease, such as heart, cancer, and mental illness. In addition to basic research into mental illness the Administration last year recommended enactment of a program of special grants to states for demonstrations in new technics for the care and treatment of mental patients, designed to reduce the length of time spent in mental hospitals. Although hearings were held on this very important measure, no action was taken. Clearly, such research and demonstrations are crucially needed, and could result in tremendous savings in public and private expenditures for mental illness.

BASIC HEALTH SERVICES

Our second objective is to help support basic health services which supplement those provided by individual physicians. These services are generally provided in the local communities but are supported in part by state and Federal funds. These include programs to improve environmental conditions, such as combating air and water pollution and promoting food and milk sanitation, and programs for controlling communicable diseases and improving preventive and diagnostic services in the mental health field. Although the Federal grants to the states in these areas are relatively small in terms of total state and local expenditures, they have a very significant effect and are regarded as vitally important by state and local health officers.

TRAINED PERSONNEL

Our third objective is to help maintain and increase the supply of trained health personnel.

As you probably are aware, the National Institutes of Health administers a number of fellowships and training grants in specialties such as psychiatry, cardiology, and the like. The Office of Vocational Rehabilitation, as a result of 1954 legislation, is also assisting in the training of much-needed specialized personnel.

The general supply of doctors is only keeping pace with the general population increase. At the same time increased specialization, increased need for researchers, increased demand for the services of practicing physicians, and the increased complexity of modern medicine all tend to call for more physicians and their better distribution geographically. How many more, no one can say. It is evident that there is no simple solution to the problem which these facts pose and none that can be effective overnight. This question is under careful study within the Department.

With respect to nursing services, our studies indicated that a two-way attack is needed: (1) to train more highly skilled nurses as administrators and supervisors, so as to achieve better utilization of our existing nurse supply, and (2) to increase the number of practical nurses, who could then relieve professional nurses from jobs requiring lesser training.

Measures were introduced in Congress last year, as a part of the Administration's health program, to achieve both these objectives—through training grants administered by the Public Health Service and, in the case of practical nurses, through the earmarking of additional vocational education grants to states for practical-nurse training. These measures are still in Committee.

Health Facilities

Our fourth objective is to help increase and improve the physical facilities within which practitioners can offer better health services. Since 1946 the Federal Government has been making grants to states for hospital construction, with matching funds provided locally. In 1954 the Administration recommended the earmarking of additional funds for the construction of chronic disease hospitals and nursing homes, as well as rehabilitation facilities and outpatient clinics. These amendments were enacted by the Congress and are giving increasing emphasis to meeting the need for low-cost facilities for long-term care and for facilities for the treatment of ambulatory patients.

Last year the Administration recommended, as a supplement to the existing hospital construction grant program, the establishment of a system of loan guaranties, analogous to the mortgage insurance offered by FHA. The bill was designed to overcome the fact that most hospitals and other health facilities are not well established credit risks for lending institutions. There have not yet been hearings on this bill.

Costs of Medical Care

Our fifth objective is that of assisting persons to meet the costs of medical care. This Administration has strongly supported voluntary health insurance as the best vehicle for achieving protection of our citizens against sudden and prolonged medical costs. There has been an amazing growth of voluntary health insurance plans. Today over 100 million persons have some form of voluntary health insurance, although the protection is admittedly inadequate in many instances. The Administration has repeatedly pointed out those areas in which voluntary health insurance protection has not been fully developed as yet, such as protection against the costs of long-term and other expensive illness, coverage in rural areas, and the like. We have urged more rapid experimentation on the part of voluntary health insurance organizations, both nonprofit and commercial. Many risks which were deemed uninsurable 15 or 20 years ago have, with the acquisition of actuarial experience, turned out to be insurable. The willingness to be venturesome and to develop new and broader forms of protection must be encouraged and must continue. The reinsurance bill proposed by the President in 1954 and 1955 aimed at encouraging and speeding up the process of experimentation.

For the most needy groups in the population the Administration last year urged enactment of a bill to provide earmarked additional funds, to be matched by the states, for improved medical care of public welfare recipients. This bill would have the additional effect of enabling public agencies to meet more fully the hospital costs of relief patients, thereby greatly aiding hospitals in reducing deficits. Hearings have not been held on this bill.

(Continued on page 116)

On the Lighter Side

February, the second month of the year, is already well upon its chilly way. February usually is noted for its Ground Hog Day (2nd), Edison's birthday (11th), Abe Lincoln's birthday (12th), St. Valentine's Day (14th), and George Washington's birthday (22nd). This year, 1956, something new has been added—a something that creeps up on us every four years before we realize it; a something that makes the unsuspecting contented heart of every bachelor skip a frenzied beat in fear of what may overtake him. We call that Something Leap Year.*

The dictionary dryly states that Leap Year is so called because, in that year, any given date *leaps* over the day of the week on which it would naturally fall; a year having 366 days in which February has 29 instead of 28 days. Now that is what the dictionary says, but you and I know that that definition is not quite the whole and entire truth. Leap Year has a more exciting meaning for the ladies and a sinister meaning for the unmarried men. Even the children have a meaning for Leap Year and have a rare good time with it—what with the giggles and sly glances from the little girls, and the confusion and much blushing from the little boys. But the meat and essence of Leap Year has been saved for and cherished by the ladies (God bless' em!). This is the time when every single and unattached living male is fair prey for any unattached female. How often have you married men seen the predatory female in action? How often have you witnessed from the sidelines the smiles and smirks, the coy glances with the fluttering of the lashes, that special touch of the hand or the gay toss of the head directed to and at the Marriageable Male? How often have you seen the downright ogling or the babying or the solicitous waiting upon of the Marriageable Male by the unattached female?

A bachelor never quite gets over the idea that he is a thing of beauty and a "boy" forever. He loves all that adulation, sweetness and light that are bestowed upon him by the ladies—married, single, young or old. The ladies are all alike (but with varying degrees of skill) in trying to attract the great M.M. The married ladies do it just for fun, or to keep their hand in, or to capture the elusive unattached male for one of their best girl friends who hasn't had much luck with the opposite sex. The single ones, young or old or in between, have a more deadly purpose in mind—a more sinister motive—and they play the game of hearts with no holds barred, no quarter given, and no questions asked. The single ladies will soften up the poor unsuspecting victim with their own peculiar bag of feminine tricks without a twinge of conscience, and then—BANG!!—hit him with the real purpose of their attentions when his guard is down. The result is inevitable—marriage. For after all, what is the primary purpose of the sweetest of sex but marriage? Leap Year is that legendary Opportunity that knocks on their collective door once every four years, and not one of these gals is going to let Mr. Opportunity go by unchallenged.

For the information of all our single ladies, the D. C. Medical Society is hoarding some pretty good prize catches for 1956. Good hunting!

Bowling note: Over half of the bowling season has passed into the record books, and the bowlers who have helped write the records are as follows:

High individual average for Sibley #1 is Dr. George Ball (108); for Suburban is Dr. Richard J. Meyer (113); for Casualty team is Mr. Paul Duffy (110); for Emergency is Dr. Harold W. Hawfield (105); for Washington Hospital Center is Dr. Maurice Van Kinsbergen (108); for George Washington is Mr. Frank Baiers (117); for Children's is Dr. George Resta (111); for Columbia team is Dr. J. Earl Kadan (108); for Prince Georges team is Dr. Charles Hageage (109); for Sibley #2 is Dr. George McClain (106); for Doctors is Dr. Allen S. Lloyd (107); for Georgetown team is Dr. Gordon MacDonald (108); for Garfield is Dr. Duane Richtmeyer (105); and for the Providence team is Dr. Robert Levine (110).

The high game of the season, so far, has been rolled by Dr. Robert Levine, who bowls for Providence and spilled the pins for a 167. The high strikes have been captured by Mr. Paul Duffy of the Casualty team with 34, and high spares of 116 by Mr. Frank Baiers of the George Washington team.

J. Earl Kadan, M.D.

---

* Assistant Editor's note: Of all the articles written by conceited males, this takes the solid brass wedding ring!

MEDICAL PROGRAM OF THE FOREIGN SERVICE

VIRGIL T. DeVAULT, M.D.

Medical Director of the Foreign Service, United States Department of State

One of the benefits authorized by the Foreign Service Act of 1946 was the Foreign Service medical program. The Committee on Foreign Affairs, in reporting on this program, commented, "Considering the tropical diseases and other occupational hazards confronting Foreign Service personnel, the protection afforded by this new program is long overdue." In May, 1947, specific steps were taken to put this program into effect and there was appointed the first Medical Director, Dr. Marion R. King, a commissioned officer in the Public Health Service.

Dr. King retired in December, 1949, and Dr. Virgil T. DeVault, Chief Surgeon and Director of the Anglo-American Hospital in Lima, Peru, was appointed successor to Dr. King. Dr. DeVault reported for duty in April, 1950, and was given a reserve commission with the U. S. Public Health Service. Dr. Harold L. Crane, chief surgeon of the Cerro de Pasco Copper Corporation in Peru for almost 30 years, was appointed Associate Medical Director in September, 1950 and set up the Examination Unit in the Department.

The basic purpose of the medical program is the protection of Foreign Service personnel from medical and financial hazards of medical conditions encountered abroad, thereby reducing medical costs to the Government and to the individual, as well as reducing time lost from duties by Foreign Servce individuals at their respective posts In addition to exposure to a greater number of diseases, there are many other medical hazards of Foreign Service employment. In some posts it may be difficult for personnel to get competent medical advice, necessary drugs, or, in the event of a serious illness or condition, adequate facilities for proper care. The conditions and stresses of living abroad are frequently an important factor in making more difficult the adjustment of the individual to his environment and are reflected in the condition of his health. All of these factors have been given consideration in developing the various elements of the Foreign Service program. This program has been made available to all agencies whose employees are entitled by law to the benefits of the Foreign Service Act of 1946 as amended, and at present includes the Foreign Service personnel of the Departments of State and Agriculture, the United States Information Agency, and the International Coöperation Administration. These groups include approximately 10,000 American employees, 12,000 local employees, and 12,000 to 15,000 dependents of American employees serving overseas at all times.

The preëmployment and in-service medical examinations are a basic part of any medical program and are of especial importance to the Foreign Service because of the unusually high cost of making a mistake on an assignment. The basic purposes of these examinations are to prevent the employment of persons whose difficulties make them undue risks for Foreign Service employment and after appointment to indicate any difficulties which will make assignment to a particular post inadvisable. It is required by regulations that all applicants for employment must pass a rigid preëmployment examination and that all employees must be examined each time they return to the United States from abroad on official orders or at the end of 2 years. In order to improve the quality of these examinations and to provide for follow-ups, an Examination Clinic was established in State Annex No. 3 under the direction of the Associate Medical Director, Dr. Crane. Contracts have been made with local internists in private practice in Washington to administer the medical examinations in the Department's Examination Clinic. The examination is quite comprehensive and thorough. In addition, contract arrangements have been made with Dr. James Patrick Scanlon for consultation on psychiatric problems. For the evaluation of difficult diagnostic conditions, arrangements have been made with the Naval Medical Center, Bethesda, Md., the Georgetown Hospital, Washington, D. C., and the U. S. Public Health Service Hospital, Baltimore, Md., for necessary supplementary tests. At the present, these examinations are being conducted at the rate of 7,500 a year.

The amendments to the Foreign Service Act passed in the spring of 1955 included authority for the examination of dependents, and this program started in July, 1955.

Arrangements have been made for administering examinations elsewhere in the United States or on Foreign Service posts when it is impossible or impractical to bring the employee or applicant to Washington for the examination. Approximately 6,000 of these examinations are being processed this year, which makes a total of 13,500 examinations both inside and outside of the Examination Clinic. The program of examining dependents will probably increase this figure to over 20,000 during the fiscal year 1956. Regulations have also been issued which require preëmployment examinations for all local employees at the post.

This Medical Branch is responsible for authorizing and approving payment of the cost of treatment of an illness or injury at a suitable hospital or clinic for an illness or injury of the employee which has been incurred abroad and is serious enough to require hospitalization. Approximately 1,100 claims are paid each year to doctors and approved institutions.

An important benefit of the medical program is the provision for authorizing travel for a person, in the event that he incurs an illness or injury at a post where there are no suitable local facilities, to the nearest place where suitable medical facilities are available. In the event of very serious illness or injury, such as tuberculosis, malignancy, or mental illness, the patient will be returned to the United States. Otherwise, the patient will be sent to medical centers such as the U. S. Army hospitals in Germany, the American Hospital in Beirut, the Air Force Hospital at Clark Field in the Philippine Islands, the Army Hospital in Tokyo, and the Gorgas Hospital in the Canal Zone. We estimate a total of 250 employees will be moved this year to obtain needed medical treatment.

Health units or clinics have been established at posts which are large enough and have serious enough medical problems to justify the assignment of a nurse or a doctor. American physicians have been established at the following posts for the primary purpose of caring for United States Government personnel: Saigon, Laskari Bazaar in Afghanistan, Djakarta, Moscow, and Baghdad. Consideration is currently being given to sending doctors to Karachi, Bangkok, Nepal, and several other posts. Full-time local doctors are employed at Bonn and Paris. American nurses are in charge of Health Units at Rome, Bonn, Belgrade, Cairo, Baghdad, Addis Ababa, Karachi, New Delhi, Rangoon, Bangkok, Saigon, Manila, Tokyo, Kabul, Phnom Penh, and Vientiane. A local nurse is in charge of the Health Unit at London. Military hospitals or dispensaries are available in Germany, France, Trieste, and in Naples, Madrid, Tripoli, Vienna, Tehran, Manila, Dhahran, Ankara, Istanbul, Seoul, Taipei, Tokyo, and several other places. Part-time advice and assistance are obtained from U. S. Public Health Service or military doctors at London, Paris, New Delhi, and Hong Kong. Financial support is given to the Anglo-American Dispensary in Warsaw.

A Medical Advisor has been selected at every post where possible; U. S. Government doctors are used where available. Otherwise a contract is made with a competent local doctor. Each post is required to consult with the Medical Advisor whenever a serious medical problem arises and to report such cases to the Medical Staff. Each post is also expected to prepare a Health and Medical Information Sheet about the health conditions at the post and the medical services available to be given to all new employees as they arrive.

An Immunization Unit has also been set up in the Medical Branch in Washington so that all personnel and dependents can obtain immunizations in the United States or at the post of assignment.

The Medical Director or his representative travels periodically to all posts in the world for the purpose of inspecting the medical facilities available at the post and advising the personnel regarding their medical problems. The Director will review the health and medical conditions and advise personnel regarding any health precautions which should be observed. He will recommend reliable local doctors and describe which illnesses and injuries can be treated at local hospitals and which cases should be sent to large medical centers or returned to the United States for treatment and evaluation.

News and Personals

MEETINGS—Past and Future

The 8th Annual Scientific Assembly of the American Academy of General Practice will convene in Washington, D. C., March 19–22, at the National Guard Armory. The annual meeting of its Congress of Delegates will be held on Saturday, March 17, in the Presidential Ballroom of the Hotel Statler, at 2 p.m., prior to the opening on Monday of the Scientific Session.

More details of this meeting are included in an editorial in this issue of the ANNALS. That this Assembly will attract the excellent attendance for which these meetings are noted is the expectation of both the national and local committees on arrangements.

Two papers were presented before the **Section on Neurology and Psychiatry** in the Medical Society's Library, January 5: "Lead as an Epileptogenic Agent," by Drs. Jorge Huertas and Francis M. Forster, of the Department of Neurology, Georgetown University School of Medicine; "Meralgia Paresthetica," by Dr. Harold Stevens, Professor of Neurology at George Washington University School of Medicine. The first paper was discussed by Dr. Maitland Baldwin, and the second by Dr. O. C. Solnitzky, both of the Georgetown faculty.

The Jacobi Society of Washington held its regular dinner meeting, January 23, at the Willard Hotel. "Investments for Physicians" was the subject under discussion. Dr. Robert U. Cooper, who has published a book in this field, was moderator for the discussion. Various types of investments suitable for physicians were discussed by Mr. Leopold Freudberg, of Young and Simon (Insurance); Mr. William M. MacKall, MacKall and Coe (Stocks and Bonds); and Mr. Frank Luchs, Shannon and Luchs (Real Estate).

The Society will meet again at the Willard, February 20, for dinner and program. The latter will consist of a Symposium on Blood Vessel Surgery by the Departments of Surgery and Anesthesiology of the George Washington University School of Medicine. Dr. Brian Blades, Professor and Head of the Department of Surgery, will be moderator. Participants will be Drs. Charles S. Coakley, Owen Gwathney, William S. McCune, and Howard C. Pierpont.

The Annual Banquet of the Jacobi Society will be held on March 24. The guest speaker will be The Honorable William O. Douglas, Justice of the United States Supreme Court.

The George Washington University Medical Society held its regular meeting, January 18. Dr. Jeanne C. Bateman, Clinical Instructor in Medicine, George Washington University School of Medicine, addressed the Society on "Palliation of Breast Carcinoma with Chemotherapy." The paper was discussed by Dr. Theodore Winship, Senior Attending Pathologist, Garfield Memorial Hospital.

The Section on General Practice met in the Medical Society's Building, January 24. The speaker, Dr. William C. Meloy, discussed "Cleft Lip and Palate Problems."

The Washington Psychiatric Society devoted its January 27 meeting, which was held in the Medical Society's auditorium, to a research project in psychotherapy, by means of a sound film, with audience participation. Discussion was led by Dr. Hans H. Strupp, psychologist, who is engaged in a research project in psychotherapy for George Washington University School of Medicine under a grant from the National Institute of Mental Health. Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital and Professor of Psychiatry at George Washington, is directing the project.

METROPOLITAN AREA SCHEDULE OF MEETINGS

Organization/Institution	March 1956	April 1956	May 1956
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA	Business Meeting Mar. 7	President's Night Apr. 18	Business Meeting May 2
WALTER REED ARMY MEDICAL CENTER Monthly Medical Meetings	Mar. 15	Apr. 19	May 17
NAVAL MEDICAL CENTER Guest Lecture Series	Mar. 22	Apr. 26	—
GEORGE WASHINGTON UNIVERSITY School of Medicine	Kellogg Lecture Series Mar. 12, 19, 21	—	—
GEORGETOWN UNIVERSITY School of Medicine	Kober Lecture Mar. 21	—	—

The George Washington University School of Medicine and the National Cancer Institute were co-hosts to the New England Cancer Society, December 10, at the University Hospital. Dr. Calvin T. Klopp, Director of the George Washington University Cancer Clinic, was chairman at the morning session, which began with a welcome by Dr. Brian B. Blades, Professor of Surgery. Papers were presented by the following faculty members: Drs. Herbert B. Taylor, William Newman, Vincent M. Iovine, Maxine Schurter, J. Keith Cromer, Louis K. Alpert, and Rudolph Hugh.

The afternoon session was held at the National Cancer Institute in Bethesda, where members of the New England Society were taken on a tour of the cancer facilities and later gathered to hear several papers by members of the Institute.

The Washington Orthopedic Club met in the Joseph S. Wall Memorial Auditorium at Children's Hospital, January 16. Two papers were presented at this meeting: "Respiratory Problems in Poliomyelitis in Children," Dr. Joseph M. LoPresti; "Gait and Posture Problems in Children," Dr. Harold Stevens.

GENERAL NEWS

The Committee on Public Information, Dr. George Maksim, Chairman, has just mailed a letter to the membership requesting volunteers for the Medical Society's Speakers Bureau, which is maintained by the Society to furnish speakers at the request of lay groups. Physicians who are interested and have had experience in speaking to lay groups are requested to make themselves known to the Committee on Public Information.

The Northern Virginia Academy of Surgery was organized at a meeting in the Evans Coffee Shop in Arlington, Virginia, December 19. The Founders Group included a large number of general surgeons and surgical specialists of nearby Virginia. The main objective of the Academy will be the cultivation and improvement of the science and art of surgery in all its branches.

The officers of the new Academy are:

Dr. Lloyd Burke, *President;* Dr. John Alexander, *Vice President;* Dr. Leonard Weyl, *Secretary;* and Dr. Michael Puzak, *Treasurer.*

Drs. Allan Ferry, Andrew Welebir and Garrett Swain were elected Councillors. Drs. Weyl and Welebir are Associate members of the D. C. Medical Society and Dr. Ferry is an Affiliate member.

The national headquaters of the **American Hearing Society** are now located at 1800 H Street, N.W. The Society has occupied offices at 817 14th Street, N.W., since 1948.

In terms of participants enrolled, 1955 was the second best year in the history of **Group Hospitalization, Inc. and Medical Service of the District of Columbia.**

Group Hospitalization registered a gain in enrollment of 58,102 subscribers, boosting the total enrolled in the hospitalization prepayment plan to 653,227 persons. The gain in enrollment for Medical Service, the doctors' prepayment plan for surgical and obstetrical care, was 75,970, making the total enrollment for that Plan, 537,065 persons. All of these subscribers live or are employed in the Washington area.

Only in 1946 did GHI have a better enrollment record. In that year the gain enrollment-wise was slightly higher, 59,358 participants. Medical Service did not begin operations until April 1948, and its best year was in 1949, when the enrollment gain was 83,229.

Last year new groups were established among employees in 424 business and professional organizations. There are now more than 4,400 groups, including those in the governmental agencies.

Georgetown University School of Nursing has been fully accredited in general and public health nursing, according to an announcement by Sister Angela Maria, S.C.N., Dean of the school.

The School was founded in 1903 as the Georgetown University Training School for Nurses, and until 1951 offered a three-year diploma course in nursing. A four-year course, leading to a Bachelor of Science in Nursing degree, was instituted in 1951, when the School became an independent department of the University. Public health nursing was introduced into the curriculum last year.

In May, 1952, the School was temporarily accredited for a 5-year period by the National League for Nursing, the official agency for the profession. The School, now fully accredited, is one of about 20 nursing schools in the country which have this type of accreditation.

Georgetown University School of Medicine has received a grant of $189,645 from the National Institute of Neurological Diseases and Blindness of the Public Health Service, to be used over a 5-year period for training in neurology. Dr. Francis M. Forster, Dean of the Medical School and Professor of Neurology, will administer the project.

Young resident physicians at Georgetown Medical Center will be trained in the neurological specialties—combating epilepsy, muscular dystrophy and multiple sclerosis, and treating victims of strokes. In the past 5 years the Medical Center has trained 20 young doctors in medical neurology. A previous grant of $65,000 from the Public Health Service provided 2 years of training for neurologists.

Prince Georges County Medical Society has elected the following officers for 1956:

Dr. William B. Hagan, Mount Rainier, *President;* Dr. Hans Wodak, Greenbelt, *Vice President;* Dr. John Kehoe, Cheverly, *Corresponding Secretary;* Dr. Lloyd Hughes, College Park, *Recording Secretary;* and Dr. Frederick E. Musser, Hyattsville, *Treasurer.*

Drs. Hagan, Kehoe, and Musser are Associate members of the D. C. Medical Society.

On January 2, 1956, *Scope*, a weekly newspaper for physicians and their professional associates, made its appearance. It is published for the **Upjohn Company** of Kalmazoo Michigan, by Physicians News Service, Inc. Printed by offset process in tabloid-size format, *Scope Weekly* will carry medical news, feature articles, illustrations, and reports from medical meetings, research laboratories, and the medical publishing field.

Miss Gertrude Bowling, former Executive Director of the Instructive Visiting Nurse Society, died December 15, 1955, at Mount Alto (Veterans) Hospital. She lived at 1812 K Street, N.W.

Miss Bowling was a graduate of Johns Hopkins School of Nursing (1915). During World War I she went overseas with the nurses attached to the First Division in France. For two years they treated the wounded in trenches and makeshift hospital areas; she received a citation for her bravery. After the War she lectured for the Red Cross and took postgraduate work in public health at Columbia University. In 1921 she came to Washington to serve for 3 years as Executive Director of the Instructive Visiting Nurse Society, but remained with the IVNS for 30 years, until she retired in April, 1951.

Miss Bowling was well known to members of the District Medical Society. In addition to her activities with the IVNS, she was a leader in nursing affairs. She was Past President of the Graduate Nurses' Association and the D. C. League of Nursing Education. She had served as Chairman of the Executive Conference of the Community Chest and, during World War II, as chief of Procurement and Assignment of Nurses in Washington under the War Manpower Board.

PERSONALS

Dr. Benjamin Karpman, Chief Psychotherapist at St. Elizabeths Hospital, has been appointed Editor-in-chief of a new journal, *Archives of Criminal Psychodynamics.* This publication will be devoted "to the encouragement of research in the field of criminal behavior, the interpretation of its psychodynamics, the treatment and curability of criminals, the promotion of superior legal understanding of the criminal in relation to society, and a more humane consideration of the criminal as an individual."

Among the members of the Editorial Board are Dr. Karl A. Menninger, Menninger Foundation, Topeka, Kansas. Dr. Melitta Schmideberg, Chairman of the Board of the Association for Psychiatric Treatment of Offenders, and Professor of Psychology at Adelphia College, New York, is the Associate Editor of the new journal.

Dr. Thomas McPherson Brown, Professor of Medicine at George Washington University School of Medicine, was named Alumnus of the Year at the annual alumni gathering of the Sidwell Friends School. The award was made at a luncheon, December 30, held in connection with the dedication of Sidwell's new George H. Sensner Science Building, named in honor of the late Mr. Sensner, who taught mathematics and science at the School from 1905 until 1941. In accepting the leather-bound citation from Mr. Dickson Loos, President of the Alumni Association, Dr. Brown paid tribute to the encouragement he had received from "Uncle George," as Mr. Sensner was known.

Dr. Brown, a member of the Class of 1925, was cited for "outstanding service to your school, your community, and your country." After Sidwell, he became a Phi Beta Kappa student at Swarthmore College and took his medical training at Johns Hopkins University. His research in the cause and treatment of arthritic diseases has received high recognition in the medical world. Recently he was named the first holder of the Eugene Meyer Chair of Medicine at George Washington.

Dr. Oscar B. Hunter, Jr., was one of the guest participants in the Los Angeles Midwinter Medical Convention, sponsored by the Los Angeles County Medical Association, at the Biltmore Hotel in Los Angeles, January 3–5. Dr. Hunter was moderator for a Panel Discussion on Blood and Blood Products, January 3. **Colonel Dwight M. Kuhns,** Deputy Director of the Armed Forces Institute of Pathology, an Associate member of the District Medical Society, was one of the scientific exhibitors at this meeting.

While on the West Coast, Dr. Hunter was invited by the Commission and Technical Committee of the Irwin Memorial Blood Bank, of the San Francisco Medical Society, and the Northern California Society of Pathologists to address their meeting, January 6, at the Blood Bank headquarters in San Francisco. Dr. Hunter spoke on "Prevention and Management of Blood Transfusion Reactions."

Dr. Joel B. Hoberman was appointed Chief of the Department of Anesthesia at Suburban Hospital, January 1, 1956.

Dr. Hoberman is a graduate of George Washington University School of Medicine. He served his internship and residency at Emergency Hospital, 1943–44, and the following year was medical officer in the Department of Anesthesia at D. C. General Hospital. He has served on the attending staffs of Garfield, Columbia and Suburban Hospitals. Dr. Hoberman was Secretary-Treasurer of both the Medical Society's Section on Anesthesia and the Potomac Society of Anesthesiologists from 1949 to 1951.

Dr. Harold Jeghers, Professor and Director of the Department of Medicine, Georgetown University School of Medicine, took part in the Dr. Harrol Woltmann Postgraduate Day at the Mansfield General Hospital in Mansfield, Ohio, October 12. Dr. Jeghers gave two lectures, one on "Oral Lesions Indicative of Systemic Disease," and the other on "Philosophy of Medical Education in a General Hospital." He also conducted a seminar on "Gastrointestinal Bleeding." Following this meeting he went to Cleveland, Ohio, to participate as clinical discussor in a Clinico-pathologic Conference conducted by Dr. Harry Goldblatt, Professor of Experimental Pathology at Western Reserve University School of Medicine.

As a guest speaker in the Postgraduate Teaching Program in Cardiology at St. Michael's Hospital, Newark, N. J., January 4, Dr. Jeghers conducted a seminar on "Congestive Heart Failure."

Dr. Anthony Zappala, Chief of the Alcoholic Rehabilitation Division of the D. C. Department of Public Health, **and Dr. Joseph F. Fazekas,** Chief of Staff, D. C. General Hospital, attended the Sixth Annual Meeting of the National States Conference on Alcoholism, held in Miami Beach, Florida, October 30–November 3. At this meeting Dr. Fazekas presented a paper entitled, "Thorazine in the Management of Alcoholism." Dr. Zappala reported on "The Legal Aspects of Commitment of Certain Alcoholic Patients."

Dr. Charles K. Bush, Jr., who is directing a study of architectural needs in mental hospitals for the American Psychiatric Association, has been notified that funds for this project have been augmented by $66,534, made available to the Association by the U. S. Public Health Service. This allotment is part of a total grant of $401,960, recently announced by Surgeon General Scheele, to be used for studies to aid in the improvement of hospital services. Dr. Bush is an Active member of the District Medical Society.

Dr. June Carol Shafer was elected to the Board of Directors of the American Academy of Dermatology and Syphilology at its annual meeting in Chicago, December 3–8. Dr. Shafer, who is an Associate member of the District Medical Society, gave a paper at this meeting on "Radiation Injuries."

Dr. George N. Raines, Professor of Psychiatry, Georgetown University School of Medicine, **and Dr. Edward J. Stieglitz,** consultant in geriatrics to St. Elizabeths Hospital, participated in a Symposium on Constructive Medicine in Aging, with special emphasis on "Problems of the Mind in Later Life," which was held in Cincinnati, Ohio, January 13. Dr. Raines spoke on "Adolescence: Pattern for the Future." Dr. Stieglitz, who assisted in planning the program, summed up the discussion.

This Second Gerontological Symposium was sponsored by the William S. Merrell Company, a Cincinnati pharmaceutical firm, which is now devoting half of its research efforts to gerontology. Of a total registration of some 650 physicians and personnel of allied fields, more than half came from communities 50 miles or more byond Cincinnati.

Dr. Joseph F. Fazekas, Chief of Staff, D. C. General Hospital, presented a paper on "Selective Symptomatic Effects of Pharmacologic Agents in Alcohol Withdrawal Syndromes" before the Annual Meeting of the American Association for the Advancement of Science, which was held in Atlanta, Ga., December 26–31. Co-authors of the paper were Drs. James Shea, Paul Sullivan, and Ralph Alman, of the D. C. General Hospital staff.

Dr. Frederick J. Balsam, Chief of Program Development of the Physical Medicine and Rehabilitation Service, Veterans Administration, was one of the speakers at a meeting of the Committee on Services to the Armed Forces and Veterans of the National Social Welfare Assembly, held in New York City, December 7. Dr. Balsam, who is an Associate member of the District Medical Society, spoke on "The Veterans Administration and the Handicapped Veteran."

Dr. Arden Freer, who retired, December 20, 1952, as Deputy Chief Medical Director of the Veterans Administration, writes that he is now in San Antonio, Texas, where he is happy in his new assignment as Director of the Medical Section of the San Antonio State Tuberculosis Hospital, a 1,000-bed institution.

Dr. Ronald A. Cox, Professor of Ophthalmology at George Washington University School of Medicine, left Washington, November 13, for India, where he spent six weeks as visiting ophthalmologist at the Scotch Presbyterian Missionary Hospital in

Bamdah. His entire journey was by plane. He returned to Washington late in December.

Dr. Karl H. Wood was guest essayist at the meeting of the Virginia-Tidewater Dental Association, November 16, held at the Cavalier Beach Hotel, Virginia Beach. Dr. Wood, an Associate member of the District Medical Society, gave an illustrated lecture on "Treatment of Fractures of the Mandible and Facial Bones by the Open Reduction Method."

Dr. Sylvan A. Steiner was appointed Medical Officer to the Alcoholic Rehabilitation Division of the D. C. Department of Public Health on June 24, 1955.

WOMAN'S AUXILIARY NOTES

In spite of a cold, rainy day the Library was filled to capacity by Auxiliary members who braved the elements to hear Representative John J. Rhodes, Republican Congressman from Arizona, speak at our January meeting. We were well rewarded by an interesting "tour" behind the Iron Curtain via the many beautiful color slides shown by Mr. Rhodes as he narrated his impressions of life in the U.S.S.R. The number of beautiful churches and cathedrals with their characteristic gold-coated, onion-shaped domes was especially noteworthy in a nation that has all but abolished religion. Moscow's wide and well-paved streets bare of motor traffic appeared strange to American eyes. In a question-and-answer period Mr. Rhodes commented on agriculture, education, recreational and cultural activities in the Soviet Union. Quite in keeping with our "tour" of Russia, our House Committee served a delicious, hot buffet luncheon, the *pièce de résistance* being Beef Strogonoff!

Mrs. Joseph M. Rom, Editor of our *Newsletter*, announced that this is now being exchanged with the 45 other Auxiliaries which publish a similar paper. This enables us to keep informed of the news and activities of the various Auxiliaries as well as to keep them informed of our projects.

Members of the Philanthropic Committee assisted with the Diabetic Drive, which took place in November. Our Auxiliary contributed to the Community Chest and to the D. C. Tuberculosis Association. Mrs. Vasilios Lambros, Chairman of the American Medical Educational Fund, acquainted us with the "80 DIMES CAMPAIGN" which has been organized to assist financially the 81 medical schools throughout the United States. It is hoped that Auxiliary members will make a particular effort to interest their lay friends in this project.

Mrs. I. Phillips Frohman has been named Ladies Entertainment Chairman for the National Meeting of the American Academy of General Practice, which convenes in Washington in March. She has named a number of the wives of Washington area physicians and Auxiliary members to serve on the various committees. These include Mmes. Merrill M. Cross, Samuel Diener, Robert R. Hottel, Frank S. Pellegrini, W. Robert Perkins, Glen S. Pincock, William R. Stovall, and Sherman A. Thomas. There will be a Coffee Hour and Hat Show and a Tour. The Mayflower Hotel Ballroom will be the setting for a beautiful Fashion Show and Luncheon. Auxiliary members are invited to attend these functions as well as the lectures and the scientific and technical exhibits at the Armory, March 19 to 23. A number of Washington physicians will give papers and present scientific exhibits at this meeting.

Mrs. George W. Ware, Ways and Means Chairman, has completed plans for the Auxiliary's Card Party-Luncheon to be held at the Kennedy-Warren on February 8. This popular social activity will benefit the Nursing Scholarship Fund. The Social Chairman, Mrs. Leonard Peterson, has arranged for a course in "Self Improvement" to be held at the Y.W.C.A. beginning on January 31 and meeting every Tuesday for eight weeks. The very popular swimming classes are under way at the American University pool and all Auxiliary members are welcome. Plans for the Annual Dinner Dance are being completed. This will be held on April 7.

Although there appears to be considerable emphasis on social activities at this time, the Auxiliary nevertheless is still engaged in its more serious activities. A Pre-registered Nurse Group is planned for the new Providence Hospital and will be formed shortly after the Hospital opens. Auxiliary members appointed to the Medical Society committees suggested by Dr. Morris are working with those groups with an aim toward closer coöperation and understanding of the work of The Medical Society of the District of Columbia.

MRS. I. PHILLIPS FROHMAN
Publicity Chairman

BOOK REVIEW

Ciba Foundation Colloquia on Ageing: Volume I, General Aspects. G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.Ch., AND MARGARET P. CAMERON, M.A., A.B.L.S., Editors for the Ciba Foundation, assisted by JOAN ETHERINGTON. Price, $6.75. Pp. 255, with 38 illustrations. Boston: Little, 1955.

This book is a collection of summarized reports of studies on the physiology, histology, and biochemistry of senescence. The introductory chapter attempts to construct, for purposes of subsequent measurement, a satisfactory definition of growing old, aging, senescence, or senility; the result, admittedly open to challenge, is: ". . . a change which . . . makes an individual progressively more liable to die."

The various reports on the effects of aging on organs, tissues, functions and chemistry confirm, in general, what has always been supposed (or, at least, accepted): that the changes due to age, possibly the result of repeated stress and trauma rather than of spontaneous exhaustion, represent a decline from the optimum state. This optimum state is probably not arrived at simultaneously nor maintained for the same length of time by all tissues, organs, or functions, and the longer a structure exists after it has reached its prime the greater will be the degree of deterioration. The situation is further complicated by the fact that various inherent or extraneous influences prevent the rate of deterioration from being uniform. The somewhat surprising conclusion, easily demonstrated in animals, is that retardation of maturity contributes markedly to longevity. The question is therefore raised as to whether the increased height and weight of man of Western civilizations, the result of improved nutrition (the converse of which retards maturation), may not be undesirable from the standpoint of attaining maximum longevity.

The propriety of applying data obtained in animal experiments to human physiology is frequently questioned in the discussions. However, it is made evident that eventual selection of important experiments in man will be facilitated by work in animals, and that finally the factor or factors responsible for human senescence may be identified and overcome. Although the various reports and discussions by no means pinpoint the aging factor, the average reader will undoubtedly glean much interesting information concerning what has been accomplished to date in the research area of gerontology.

JOSEPH F. FAZEKAS, M.D.

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional current books which, in their opinion, merit comment.

Postural Back Pain. MILTON C. COBEY, M.D., F.A.C.S., Professor of Orthopedic Surgery, Georgetown University Medical School, Washington, D. C. Pp. 78. Springfield, Ill.: Thomas, 1956.

White Coolies. BETTY JEFFREY. Illustrated by J. P. L. Kickhefer. Price, $3.75. Pp. 204. New York: Philosophical Library, 1955.

Medical Support of the Army Air Forces in World War II. MAE MILLS LINK AND HUBERT A. COLEMAN, Office of the Surgeon General, USAF, Washington, D. C. Price, $7.00. Pp. 1027. Washington, D. C.: U. S. Government Printing Office, 1955.

Therapy of Fungus Diseases—An International Symposium, presented June 23, 24, 25, 1955, by The Division of Dermatology, Department of Medicine, School of Medicine and Medical Extension, University Extension, University of California at Los Angeles. Edited by THOMAS H. STERNBERG, M.D., Professor of Medicine (Dermatology) and Assistant Dean for Postgraduate Medical Education, AND VICTOR D. NEWCOMER, M.D., Associate Professor of Medicine (Dermatology). Price, $7.50. Pp. 337. Boston: Little, 1955.

WILLIAM DAVIS TEWKSBURY, M.D., F.A.C.P.

(1884–1955)

Dr. William D. Tewksbury, a Life member of the Medical Society of the District of Columbia, died at his home at 101 East Lenox Street, Chevy Chase, Md., December 28, 1955. He was a pioneer in the surgical treatment of tuberculosis.

Dr. Tewksbury was born in Hutchinson, Kansas, May 7, 1884. He graduated from George Washington University School of Medicine in 1908. The following year he was resident physician at the D. C. Tuberculosis Hospital. From 1909 to 1911 he was in charge of the Catawba Sanatorium in Virginia, resigning to become Superintendent of the D. C. Tuberculosis Hospital, a position he held until 1920.

Dr. Tewksbury was on the staff of George Washington University School of Medicine as Clinical Professor of Medicine in 1915 and as Associate Professor of Medicine at Georgetown University School of Medicine from 1917 to 1919. From 1915 until 1921 he was physician in charge of the D. C. Health Department's Tuberculosis Clinic.

Dr. Tewksbury pioneered in the treatment of acute pulmonary diseases by means of artificial pneumothorax in 1916. He was the author of numerous papers on pulmonary diseases.

He was a Fellow of the American College of Physicians and the American College of Chest Physicians. He served on the Board of Directors of the District Tuberculosis Association and, in addition, was a member of the American Medical Association, the Hippocrates-Galen Society, and, during emergency periods, of the Volunteer Medical Service Corps. He was elected to Active membership in the District Medical Society in 1912 and became a Life member in 1953. His social organizations included the Sigma Alpha Epsilon and Phi Chi fraternities and the Chevy Chase Club.

Surviving him are his wife, Mrs. Susan West Tewksbury, and two daughters, Mrs. Jane Clementson, of the home address, and Mrs. John Harry King, 116 West Blackthorn Street, Chevy Chase, Md.

Metrazol for Elderly Patients—Aschenbach

(*Continued from page 72*)

CONCLUSIONS

Metrazol has definite value in certain cases of disturbed cerebral circulation, especially in those patients in whom long-standing organic changes due to hypertension or arteriosclerosis are not present.

A trial course of Metrazol is certainly indicated in those troublesome cases in which memory loss, etc. might otherwise necessitate institutional care.

Liquid therapy may improve dosage accuracy in those elderly individuals who lose or destroy the tablets or who are suspicious of being poisoned.

BIBLIOGRAPHY

1. CHESROW, E. J., GIACOBE, A. J., AND WOSIKA, P. H.: Metrazol in arteriosclerosis associated with senility. Geriatrics, 1951, **6**, 319.
2. FONG, T. C. C.: Oral metrazol therapy in psychoses with cerebral arteriosclerosis. J. Am. Geriatric Soc., 1953, **1**, 662.
3. LEVY, S.: Pharmacological treatment of aged patients in a state mental hospital. J.A.M.A., 1953, **153**, 1260.
4. LIEBERMAN, A. L.: Subconvulsive intravenous metrazol therapy in mental patients; preliminary report. Geriatrics, 1954, **9**, 125.
5. SMIGEL, J. O., SERHUS, L. N., AND BARMAK, S.: Metrazol; its place in geriatric therapy. J. M. Soc. New Jersey, 1953, **50**, 248.
6. SOMMER, R. J.: Oral metrazol therapy in cerebral arteriosclerosis. Illinois M. J., 1954, **106**, 323.
7. FAZEKAS, J. F., ALMAN, R. W., AND BESSMAN, A. N.: Cerebral physiology of aged. Am. J. M. Sc., 1952, **223**, 245.
8. GOODMAN, L., AND GILMAN, A.: The Pharmacological Basis of Therapeutics, 2nd ed. New York: Macmillan, 1955.
9. SCHMIDT, C. F.: The Cerebral Circulation in Health and Disease. Springfield, Ill.: Thomas, 1950.

Administration's Activities in Health—Perkins

(*Continued from page 105*)

SUMMARY

These, then, are the objectives of our Department in the health field. We hope that there will be active consideration in the Congress next year with respect to the problems I have mentioned, and prompt and effective action.

In summary, the Administration philosophy is one of preserving traditional doctor-patient relationships and of removing obstacles to improved medical practice, rather than of imposing restrictions on the physician's freedom. We are seeking to remove the barriers of inadequate scientific knowledge, inadequate or nonexistent public health programs, shortages of trained personnel, inadequate facilities, and the lack of financial means to pay for medical care.

To the extent that we are successful in these objectives, to that extent the practicing physician will have an even greater opportunity for serving mankind, in the manner he sees fit, and in the way that he knows best.

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *March*, 1956 NUMBER 3

PULMONARY ARTERIOVENOUS FISTULA

Review with Report of a Case

GEORGE WILLIAM WARE, M.D.

Instructor in Thoracic Surgery, Georgetown University School of Medicine; Associate in Thoracic Surgery, Georgetown University and Providence Hospitals

A PULMONARY arteriovenous fistula may be described as an abnormal congenital communication between pulmonary artery and vein. In rare instances the arterial component may arise from the thoracic aorta. Various titles are used for this condition in the literature—congenital arteriovenous varix, arteriovenous aneurysm and cavernous hemangioma. Considering the pathology present, the term "pulmonary arteriovenous fistula" would seem preferable.

HISTORY[1–8]

Churton[2] in 1897 described the first published case. The specimen was obtained at autopsy in a 12-year-old boy. Wilkens reported in the German literature the next case in 1917.[3] Although preceded by the writings of Bowers[9] and Reading[10] in state medical journals, Rodes[6] published the first widely read report in this country in 1938. This author was also the first to point out the occurrence of secondary polycythemia in this condition. The following year, Smith and Horton[7] reported the first clinical diagnosis by the use of angiocardiography. Hepburn and Dauphinee[4] in 1942 described the first surgical cure by use of pneumonectomy in a young woman.

PATHOLOGIC PHYSIOLOGY[3, 8, 11–19]

In this condition the ordinary pulmonary capillary bed is by-passed and proper oxygenation of pulmonary arterial blood does not occur. Up to 80 per cent of the right ventricular output may pass directly into the affected pulmonary vein. Such a large shunt results in poor saturation of systemic arterial blood. As a consequence, peripheral cyanosis and dyspnea occur. Low saturation of arterial blood also stimulates red blood cell formation as a compensatory mechanism; hence polycythemia occurs.

In contradistinction to systemic arteriovenous fistulae, cardiac embarrassment is rare. Lack of cardiomegaly and congestive heart failure are believed to be due to (1) central location of fistula and (2) low resistance of the pulmonary circulation associated with a highly distensible vascular bed.

On direct examination the fistula is usually found subpleurally and in the lower lobes of the lung. In about one-half of the cases multiple fistulae are found, and they may be bilateral in location. The afferent artery is markedly dilated and leads into distended sacs or lobules. The latter are connected with an equally distended vein or veins. There may be numerous vascular adhesions to the chest and/or the diaphragm. The afferent artery is usually a pulmonary vessel but may arise from the thoracic aorta or a bronchial vessel.[20]

On microscopic examination the walls of the vessels are lined with endothelial cells. Calcification may occur. The walls are so attenuated that rupture appears imminent. Clots are frequently present in the connecting lobules. The walls of the fistula itself are usually composed of hyalinized fibrous tissue, elastic fibers, and irregular smooth muscle cells. The surrounding lung is normal except for some compression due to the fistula.

Incidence, Sex, Etiology

The lesion is not common. Only 1 case was observed at the University of Chicago during a 15-year-period. This case occurred among 240,000 admissions.[21] Stringer and associates[22] in a recent survey of the literature state that 150 cases have been reported. Most authors describe the condition as more common in males.[23, 24]

Pulmonary arteriovenous fistula is a congenital condition and is believed to be a manifestation of hereditary hemorrhagic (familial) telangiectasia (Osler-Weber-Rendu disease).[21] This disorder has been shown to be truly hereditary and transmitted as a dominant characteristic affecting both sexes.[25–27] At least 50 per cent of patients with pulmonary arteriovenous fistula have telangiectasia involving the skin, mucous membranes or the viscera. Location on the lips, face, tongue and nailbeds is most common.[27, 28] Cases of pulmonary arteriovenous fistula have been reported in sibling[15, 26, 29, 30] and in father and son.[23, 31]

Symptoms and Signs[11–13, 21, 32–41]

Some patients are asymptomatic, the lesion being discovered on a routine chest film. Dyspnea on exertion, though not an early symptom, may be extreme. A history of hemoptysis is obtained in about one-third of the patients and on rare occasions may terminate fatally.[6, 37] Recurrent attacks of epistaxis are common. Chest pain and cough are occasional complaints.

Symptoms referable to the central nervous system are frequent. Fainting, dizziness, convulsions, tinnitus, headache and hemiplegia have all been recorded. The European writers have attributed these symptoms to air emboli entering the pulmonary veins at the time of hemoptysis.[42–44] The American writers have considered the cause to be local anoxia due to arterial desaturation or cerebral thrombosis due to polycythemia.[19, 35]

Cyanosis of the lips and fingers is common and usually progressive. The onset of cyanosis may be in infancy or even at birth.[13, 45, 46] Clubbing of the fingers and toes is usually present. In the vast majority a murmur can be heard over the involved area of lung. This murmur may be continuous with a systolic accentuation or be heard only during systole. An increase in intensity as a rule occurs during inspiration. Examination of the heart, liver and spleen and the recording of blood pressure are normal. Telangiectasia of the skin and/or mucous membranes are common.

Laboratory Values

Unless recent hemorrhage has occurred the red blood cell count is elevated. Goldman[3] has reported a count of 11,000,000 red blood cells in 1 patient. The hematocrit is similarly elevated—up to 82.[12] The white blood cell count is normal. The red cell mass and the blood volume are increased, while plasma volume remains normal.[17, 18, 35, 39, 47]

The electrocardiogram is usually normal, but right axis deviation has been occasionally reported.[11, 48, 49] Cardiac catheterization has been performed by a number of authors.[11, 23, 25, 39, 46, 50] The cardiac output is normal in most instances but may be elevated. Recorded pressures in the right ventricle and pulmonary artery have been normal. Calculation of the shunt through the fistula has shown it to range from 42 to 80 per cent of the right ventricular output.

RADIOGRAPHIC APPEARANCES[3, 8, 19, 44, 48, 51–57]

A routine chest film will show a round mass or lobulated density usually located in the middle or lower lobes. Careful observation will show a connection of the lesion to the hilum of the lung. Calcifications may be present. With prolonged clinical observation of the patient additional lesions may appear on X-ray examination.[58] Fluoroscopy and kymography may show pulsation. Performance of the Valsalva test (forced inspiration with the glottis closed) will cause the mass to decrease in size. The Müller test (forced expiration with the glottis closed) produces an increase in the mass. Tomography is a valuable adjunct, since it will reveal the continuity of the mass with the hilar vessels.

Angiocardiography is mandatory in all cases in order that multiple or bilateral lesions will not be overlooked.[59, 60] The 14 by 17 chest film is used so that both lungs are X-rayed. Films are taken 2 and 4 seconds after injection of the dye. One death has been recorded following angiocardiography.[61] In this instance 35 c.c. of 70 per cent Diodrast was injected by means of a catheter in the right auricle. Fatal pulmonary edema occurred.

COMPLICATIONS

In addition to the central nervous system involvement mentioned under symptoms, brain abscess may occur.[10, 15, 17, 18, 62–64] This catastrophe is usually fatal. The cause is (1) paradoxical embolus through the fistula by-passing the pulmonary capillaries, (2) bacterial endarteritis, or (3) encephalomalacia secondary to anoxemia. Hemothorax from pleural rupture of the fistula has been encountered.[9, 32] Bacterial endarteritis with multiple abscess formation has been reported.[5, 39] Heart failure[65] and fatal cerebral embolism[66] have been reported in single instances.

DIFFERENTIAL DIAGNOSIS

Pulmonary arteriovenous fistula has usually been confused with 1 of 3 entities:

Polycythemia rubra vera (primary polycythemia) resembles pulmonary arteriovenous fistula because of the cyanosis, polycythemia and cerebral manifestations. Cases of primary polycythemia are seen in patients in late middle life. The spleen is enlarged and an increase in platelets and white blood cells occurs. Stippling of the erythrocytes is seen, and the bone marrow reveals immature white blood cells.

Congenital heart disease is also confused because of the cyanosis, clubbing of the fingers and toes, disability, and polycythemia (indeed, 1 of Baker's cases was referred for a Blalock anastomosis for a supposed tetralogy of Fallot). Differentiation can be made from the chest film, location of the murmur, cardiac catheterization and angiocardiography.

Tuberculosis is the third most common misdiagnosis. Some patients have been admitted to sanitoria and treated by bed rest, pneumothorax or streptomycin. The proper diagnosis should be established by radiography, presence of a murmur, and negative bacteriologic studies.

TREATMENT

Irradiation, and the use of phenylhydrazine, radioactive phosphorus or venesection (all for a misdiagnosis of primary polycythemia) have proved useless.[7, 16, 23, 67] Induction of the pneumothorax in an attempt to close the fistula has succeeded only in collapsing the surrounding lung.[4, 38]

Surgical treatment is the only method of cure. Prior to surgery multiple lesions must be ruled out. The possibility of extensive vascular adhesions between lung and chest wall or diaphragm must be considered. The presence of anomalous vessels has been recorded.[38, 56, 57, 68, 69] Lindskog[57] has advised phlebotomy prior to operation and the use of plasma during surgery and the patient's own blood for transfusion as needed.

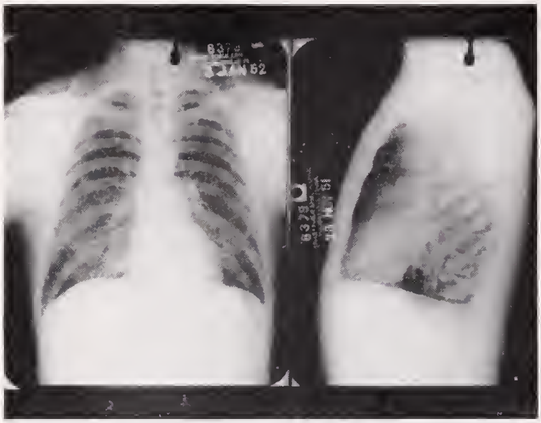


FIG. 1. Preoperative chest film showing lobulated density in left lower lobe.

Pneumonectomy was the original operation used.[4] Later, realization of the possibility of multiple lesions made conservation of lung tissue essential. Lobectomy is the usual operation.[70] Segmental or wedge resection, especially for multiple lesions, is practiced.[71-73] Suture obliteration of the fistula for small or multiple lesions has been successful. Packard[74] ligated the main pulmonary artery with definite improvement for several years. Later chest films suggested recurrence of the fistula. Parker[75] has reported an interesting case in which he was able to dissect out the fistula in toto without sacrificing lung tissue.

REPORT OF CASE

G. B., a 36-year-old white corporal, was admitted to Valley Forge Army Hospital on November 21, 1951. The transfer diagnosis was pulmonary tuberculosis. Prior to planned separation from the service a routine chest film was obtained. Interpretation of this film was "possible tuberculosis of the left lung." The patient was hospitalized. A history of hemoptysis was obtained. The patient was diagnosed clinically as having tuberculosis and transferred to Valley Forge Army Hospital for treatment.

On admission he described a cough of 2 years' duration which was productive of a quarter of a cupful of sputum per day. During the preceding year he had noted easy fatigue and dyspnea on exertion. In July of 1951 he had had 2 episodes of hemoptysis. One tablespoonful of blood was produced each time, followed by blood-streaking for 24 hours. There were no central nervous system symptoms.

In 1949 the patient had sustained a fracture of the sixth left rib. X-ray films at this time showed the fractured rib, but the report mentioned no other abnormalities.

On physical examination the intern reported a loud murmur over the sixth and seventh interspaces in the mid-axillary line. The murmur increased on inspiration. This finding had not been reported on previous physical examinations. There was mild cyanosis and clubbing of the fingers.

Blood examination showed 17 Gm. of hemoglobin and a hematocrit of 55. A chest film revealed an area of increased density in the basal division of the left lower lobe measuring 4 by 7 cm. (figure 1). This density increased on inspiration. Angiocardiograms revealed definite connection of the mass with pulmonary vessels (figure 2). No other fistulae were noted.

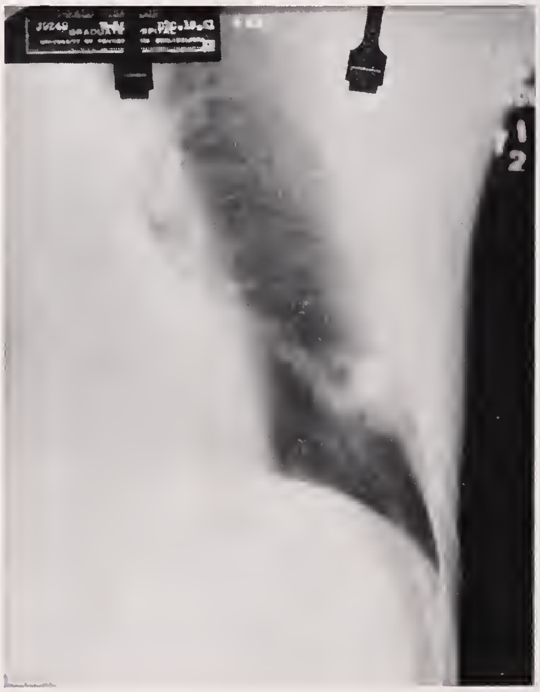


FIG. 2. Angiocardiogram outlining fistula of left lower lobe

Electrocardiograms and ballistocardiograms were normal. All examinations for tuberculosis were negative. Bronchoscopy and bronchograms revealed normal findings.

Surgery was performed in January 1952. A pulsating mass was found in the basilar division of the left lower lobe (figure 3). A routine lobectomy was performed. No aberrant vessels were noted, although the pulmonary artery and inferior pulmonary vein were considered larger than normal. After operation atelectasis of the remaining left lung occurred and required 2 bronchoscopies for its correction. Recovery was then rapid.

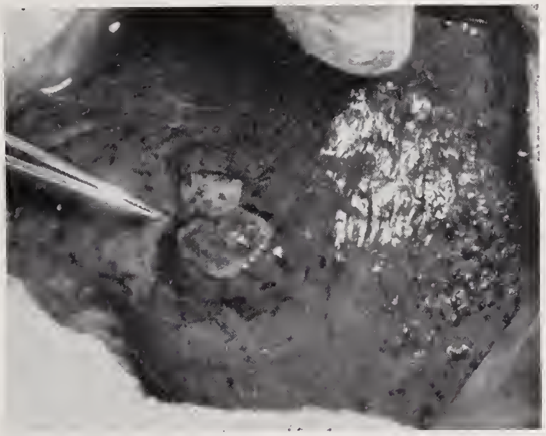


FIG. 3. Arteriovenous fistula as seen at the time of surgery

Pathologic examination of the resected lobe confirmed the diagnosis of arteriovenous fistula. Two days postoperatively the red blood cell count was 4,000,000 and the hematocrit 49 with 14 Gm. of hemoglobin. One month postoperatively the red blood cell count was 4,000,000 and the hematocrit 45 with 13.4 Gm. of hemoglobin.

SUMMARY

Pulmonary arteriovenous fistula is an abnormal congenital communication between pulmonary artery and vein. Since the pulmonary capillary bed is by-passed, arterial systemic blood is unsaturated with oxygen. As a result, dyspnea and polycythemia occur. Despite the large volume of the shunt, cardiac embarrassment is rare.

Pulmonary arteriovenous fistulae are most common in men, are located usually in the lower lobes of the lung, and may be bilateral. Dyspnea on exertion, hemoptysis and central nervous system symptoms are common. Peripheral cyanosis and a murmur localized over the lesion are the most common symptoms. Elevated red blood cell count and hematocrit values are routinely found.

Radiographic examinations will prove the diagnosis; plain films, fluoroscopy and angiocardiography should be employed.

Brain abscess is the most serious of complications. Surgical excision offers the only method of cure. Because of the possibility of multiple lesions lung tissue must be conserved. Lobectomy or segmental resection is the preferred operation.

BIBLIOGRAPHY

1. BISGARD, J. D.: Ann. Surg., 1947, **126,** 965.
2. CHURTON, T.: Brit. M. J., 1897, **1,** 1223.
3. GOLDMAN, A.: Am. Rev. Tuberc., 1948, **57,** 266.
4. HEPBURN, J., AND DAUPHINEE, J. A.: Am. J. M. Sc., 1942, **204,** 681.
5. MARCHAND, E. J., HEJTMANCIK, M. R., AND HERRMANN, G. R.: Am. Heart J., 1951, **42,** 682.
6. RODES, C. B.: J.A.M.A., 1938, **110,** 1914.
7. SMITH, H. L., AND HORTON, B. T.: Am. Heart J., 1939, **18,** 589.
8. YATER, W. M., FINNEGAN, J., AND GIFFIN, H. M.: J.A.M.A., 1949, **141,** 581.
9. BOWERS, W. F.: Nebraska M. J., 1936, **21,** 55.
10. READING, B.: Texas J. Med., 1932, **28,** 462.
11. BAKER, C., AND TROUNCE, J. R.: Brit. Heart J., 1949, **11,** 109.
12. BURCHELL, H. B., AND CLAGETT, O. T.: Am. Heart J., 1947, **34,** 151.
13. DANIS, P. G.: South. M. J., 1951, **44,** 217.
14. FREEDMAN, M. J., HENSLER, N. M., AND POLLOCK, B. E.: Am. Heart J., 1952, **44,** 594.
15. GLENN, F., HARRISON, C. S., AND STEINBERG, I.: Ann. Surg., 1953, **138,** 886.
16. GOLDMAN, A.: Dis. Chest, 1943, **9,** 479.
17. MURI, J. W.: Ibid., 1953, **24,** 49.
18. MURI, J. W.: Am. J. Surg., 1955, **89,** 265.
19. SLOAN, R. D., AND COOLEY, R. N.: Am. J. Roentgenol., 1953, **70,** 183.
20. LAWRENCE, E. A., AND RUMEL, W. R.: J. Thoracic Surg., 1950, **20,** 142.
21. ADAMS, W. E., THORNTON, T. F., Jr., AND EICHELBERGER, L.: A.M.A. Arch. Surg., 1944, **49,** 51.
22. STRINGER, C. J., STANLEY, A. L., BATES, R. C., AND SUMMERS, J. E.: Am. J. Surg., 1955, **89,** 1054.
23. BAER, S., BEHREND, A., AND GOLDBURGH, H. L.: Circulation, 1950, **1,** 602.
24. TAIANA, J. A., SCHIEPPATI, E., AND PINI, A.: Ann. Surg., 1955, **141,** 417.
25. KUSHLAN, S. D.: Connecticut M. J., 1952, **16,** 505.
26. MOYER, J. H., AND ACKERMAN, A. J.: Ann. Int. Med., 1948, **29,** 775.
27. WILLIAMS, C. F., AND FLINK, E. B.: J. Lab. & Clin. Med., 1947, **32,** 1401.

28. Rundles, R. W.: Am. J. M. Sc., 1945, **210,** 76.
29. Garland, H. G., and Anning, S. T.: Brit. M. J., 1950, 1, 700.
30. Goldman, A.: J. Lab. & Clin. Med., 1947, **32,** 330.
31. Tobin, J. R., and Wilder, T. C.: Ann. Int. Med., 1953, **38,** 868.
32. Armentrout, H. L., and Underwood, F. J.: Am. J. Med., 1950, **8,** 246.
33. Brink, A. J.: Quart. J. Med., 1950, **43,** 239.
34. Carswell, J., Jr.: J. Thoracic Surg., 1950, **19,** 789.
35. Giampalmo, A: Acta med. scandinav. (supp. 248), 1950, **139,** 1.
36. Hedvall, E.: Acta tuberc. Scandinav., supp. 21, 1949, pp. 32–5.
37. Israel, H. L., and Gosfield, E., Jr.: J.A.M.A., 1953, **152,** 40.
38. Jones, J. C., and Thompson, W. P.: J. Thoracic Surg., 1944, **13,** 357.
39. Maier, H. C., Himmelstein, A., Riley, R. L., and Bunim, J. J.: J. Thoracic Surg., 1948, **17,** 13.
40. Nightingale, J. A.: Brit. M. J., 1951, **2,** 402.
41. Roberts, D. J., and Hutchison, J. E.: Am. J. Roentgenol., 1951, **66,** 743.
42. Boerema, I., and Brilman, R. P.: J. Thoracic Surg., 1948, **17,** 705.
43. Crafoord, C.: Discussion in Ann. Surg., 1950, **132,** 609.
44. Lindgren, E.: Acta radiol., 1946, **27,** 585.
45. Haynes, L. L., and Mikal, S. J.: U. S. Armed Forces M. J., 1954, **5,** 1514.
46. Hultgren, H. N., and Gerbode, F.: Am. J. Med., 1954, **17,** 126.
47. Mitchell, F. N.: South. M. J., 1954, **47,** 1156.
48. Barnes, C. G., Fatti, L., and Pryce, D. M.: Thorax, 1948, **3,** 148.
49. Cooley, D. A., and McNamara, D. G.: J. Thoracic Surg., 1954, **27,** 614.
50. Friedlich, A. L., Bing, R. J., and Blount, S. G., Jr.: Bull. Johns Hopkins Hosp., 1950, **86,** 20.
51. Beddard, F. D.: Brit. M. J., 1949, **1,** 1038.
52. Charbon, B. C., Adams, W. E., and Carlson, R. F.: J. Thoracic Surg., 1952, **23,** 188.
53. Crane, P., Lerner, H. H., and Lawrence, E. A.: Am. J. Roentgenol., 1949, **62,** 418.
54. Dignam, B. S.: Am. Heart J., 1951, **41,** 316.
55. Forsee, J. H., Mahon, H. W., and James, L. A.: Ann. Surg., 1950, **131,** 418.
56. Grishman, A., Poppel, M. H., Simpson, R. S., and Sussman, M. L.: Am. J. Roentgenol., 1949, **62,** 500.
57. Lindskog, G. E., Liebow, A., Kausel, H., and Janzen, A.: Ann. Surg., 1950, **132,** 591.
58. Makler, P. T., and Zion, D.: Am. J. M. Sc., 1946, **211,** 261.
59. Duisenberg, C. E., and Arismendi, L.: Radiology, 1949, **53,** 66.
60. Ettinger, A., Magendantz, H., and Russo, E. A.: Ibid., 1949, **53,** 261.
61. Sisson, J. H., Murphy, G. E., and Newman, E. V.: Bull. Johns Hopkins Hosp., 1949, **76,** 93.
62. Chambers, W. R.: Ann. Surg., 1955, **141,** 276.
63. Stern, W. E., and Naffziger, H. C.: Ibid., 1953, **138,** 521.
64. Wodehouse, G. E.: J. Thoracic Surg., 1948, **17,** 408.
65. Cleland, W. P.: Thorax, 1948, **3,** 48.
66. Cope, G. C.: Brit. J. Tuberc., 1953, **47,** 166.
67. Alexander, W. S.: New Zealand M. J., 1945, **44,** 180.
68. Campanale, R. P., Robbins, L. R., Hoffman, A. A., and Shaw, R. R.: U. S. Armed Forces M. J., 1954, **5,** 1037.
69. Watson, W. L.: Surgery, 1947, **22,** 919.
70. Beierwaltes, W. H., and Byron, F. X.: J.A.M.A., 1947, **134,** 1069.
71. Janes, R. M.: Brit. J. Surg., 1944, **31,** 270.
72. Pugsley, H. E., and Janes, R. M.: Dis. Chest, 1951, **20,** 177.
73. Rosack, H. P., French, S. W., and Paul, J. S.: Am. J. Surg., 1954, **87,** 883.
74. Packard, G. B., and Waring, J. J.: A.M.A. Arch. Surg., 1948, **56,** 725.
75. Parker, E. F., and Stallworth, J. M.: Surgery, 1952, **32,** 31.

PARTIAL NEPHRECTOMY FOR ANOMALIES OF THE PELVIS AND CALYCES OF THE KIDNEY

Discussion of 100 Cases of Recurrent Pyelonephritis*

W. CALHOUN STIRLING, M.D.
Washington

MALFORMATIONS of the kidney and ureter are conveniently divided into number, size, form, position and derangement of architecture. We are in general agreement as to the pattern of the normal pelvis and calyces of the kidney; however, many bizarre pelvic and calyceal formations are discovered incidentally during urography.

It is the purpose of this paper to limit the discussion to the question of form, and to refer to a possible relationship between recurrent pyelonephritis and malformations of the pelvis and calyces of the kidney. This discussion embraces different pathologic conditions which have one factor in common, namely, the treatment, which is partial nephrectomy.

This is a review of my series of 100 cases of recurrent pyelonephritis with pelvic or calyceal deformity; the findings are based on the premise that many recurrent infections of the kidney result from malformation of the pelvis and calyces.

The incidence of innate anomalies and their complications has been estimated both clinically and at necropsy. Smith and Orkin[1] state that "no other visceral system is so frequently misformed, and 40 per cent of all pathologic lesions of the kidneys and ureters are due to congenital anomalies." They reviewed a series of 18,460 consecutive admissions and found 471 instances of congenital anomalies of the upper urinary tract, an incidence of 2½ per cent. Many of these patients were seen prior to intravenous urography, and therefore the series does not represent a true picture of the incidence. These authors discussed various anomalies and found the most frequent to be duplication of the renal pelvis and ureter (20.7 per cent), with congenital disfiguration of the renal pelvis and calyces next (16.7 per cent). An abnormally formed kidney may not cause symptoms, but it always constitutes a potential risk.

Campbell[2] states that "10 per cent of normal renal pelves are bifid." He found dilatation of a single calyx uncommon, a situation usually resulting from congenital stricture or abnormal narrowing of a single calyx. It is often a postmortem finding.

Malformations are of importance to the urologist because (1) renal reserve is diminished, (2) the kidney may be displaced or malformed, (3) urinary obstruction may be present, and (4) there may be an abnormal discharge of urine.

In 1941 Dees[3] reviewed 1,410 cases at Duke Hospital in Durham, North Carolina, and found 135 congenital anomalies of the upper urinary tract, an incidence of 9.6 per cent.

In the production of double renal pelves and ureters the incomplete variety has been shown by Pohlman[4] to be due to a splitting of the ureteral bud before it enters the metanephros, the level of bifurcation varying considerably. The complete variety is thought to be due to a second ureter arising as a bud from the wolffian duct and entering the metanephros, dividing as a normal ureter does.

A number of papers have been written on the subject of calyceal deformities and their surgical correction. Described as calyceal diverticulosis, a hydrocalycosis, or a pyelogenic cyst, these deformities revealed evidence of dilatation with or without the presence of calculi. Calyceal dilatations are smaller than a cortical cyst and connect with the pelviocalyceal system by a narrow infundibulum. McKim and Smith[5] reported 120 cases of serous cysts of the kidney, none of which connected with the renal pelvis. These observations were confirmed by Harpster, Brown and Delcher.[6] A cyst may have a congenital background; some, no doubt, represent the end result of inflammatory or calculus obstruction of a calyx. Stricture or fibrosis of an infundibulum may also be a contributing factor.

---

* Read before the Uro-Surgical Society at Virginia Beach, Va., October 12, 1955.

The hydrodynamics of the pelviocalyceal system has been studied by Narath,[7, 8] Woodside,[9] and Walmsley.[10] Walmsley stated that the pelvis is a series of chambers contracting in regular sequence, and that the calycopelvic juncture possesses sphincteric muscle fibers.

Narath[8] was unable to demonstrate a sphincter at the neck of the minor calyces but described a "musculus sphincter calyces" separating the calyx from the pelvis of the kidney.

Here we shall postulate 3 or more factors which enter into the production of calyceal dilatation: (1) progressive caudal hydronephrotic changes, (2) achalasia of the musculature about the calycopelvic junction, (3) congenital malformation of the minor calyces, and (4) mechanical or inflammatory progressive dilatation of a calyx by stricture or fibrosis of an infundibulum.

As to sex, the incidence of abnormal pelves in my series was more than 4 women to 1 man. Neither kidney seemed to have any partiality for this deformity. The average age of the patient was in the third decade.

Ninety-five per cent of this group had pyuria and 15 per cent showed red blood cells in the urine. Dull aching or acute pain was a finding in 80 of these patients, and 25 complained of dyspepsia or evidence of gastrointestinal upset. Either diurnal or nocturnal frequency of urination was found in 65 patients, and 10 males complained of dysuria. A palpable mass was noted in 10 patients, and low grade uremia, characterized by an elevated blood nonprotein nitrogen, abdominal distention and gaseous formation, was in evidence in 20 per cent. In the costovertebral angle radiating anteriorly, tenderness was found in 78 patients.

A laparotomy had been performed in 60 of these patients prior to this study, one-half of whom had not experienced any relief of their presenting symptoms.

Fetter and Smith[11] state, "There isn't any problem which affords more discussion than the management of anomalies of the kidney, many of which are noted during an abdominal study." This has also been my experience as chief of the section on urology in two general hospitals in which the heads of the department of surgery are very alert to the possibility of renal disease. In many patients with obscure abdominal or urinary findings, a routine intravenous pyelogram has revealed many anomalous urinary diseases. A delayed excretory pyelogram should be routinely performed in any patient with a suspected anomaly of the kidney. Roentgenograms made 30 and 60 minutes after the initial injection will demonstrate the presence of stasis or poor drainage as a result of narrowing of an infundibulum.

In addition to reporting their data, some roentgenologists are inclined to furnish a diagnosis and even to outline a course of treatment. This sometimes leads a referring physician to accept a diagnosis which has not been confirmed by a urologist. Operations are frequently performed by general surgeons on urologic patients who have not had an adequate workup. I cannot emphasize too strongly the bad effects of such practice and constantly tell my colleagues that these patients should be referred to a urologist for a complete urologic examination.

Partial nephrectomy was first done in 1887. It later fell into disfavor as a result of infection, hemorrhage, and other postoperative complications. During the last 20 years this operation has again regained its proper position in urologic surgery. In 1942 I[12] reported 11 cases of resection for horseshoe kidney, calyceal diverticulum and solitary cyst, emphasizing the value of suture of individual vessels.

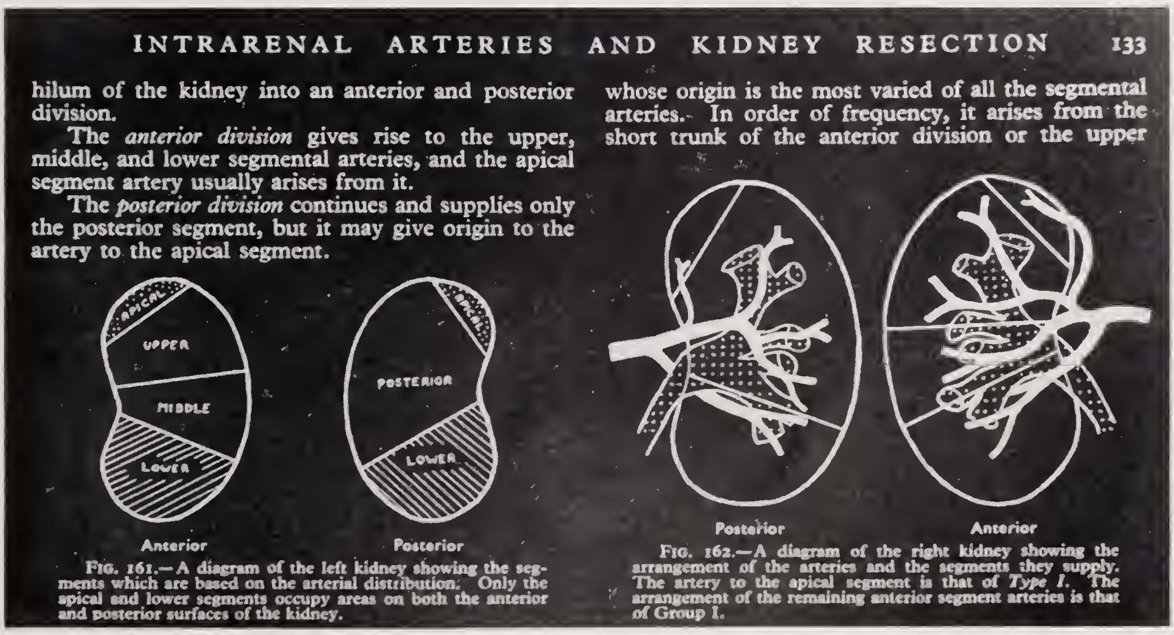
The rationale of partial nephrectomy has been established as a method for eliminating poorly draining segments, economizing renal tissue, reducing morbidity, lessening infection, and preventing reformation of a calculus. The indications are broad and its technic simple, and if proper respect is accorded the blood supply and adequate drainage assured, the requirements of a sound surgical procedure are fulfilled. Campbell,[2] O'Conor,[13] Prather[14] and Hess[15] indicated the value of this procedure in such varied circumstances as the removal of cysts, benign and some malignant tumors, carbuncles, calyceal diverticula, infarcts, diseased half of a double kidney, and, in some instances of traumatic injury, the portion of a kidney which has been detached.

Graves[16] advocates partial resection of the kidney in renal calculus and tuberculosis. After conducting extensive experiments on the blood supply of various segments of the kidney, he concluded that there is a constant segmental arrangement of the renal vessels with no collateral circulation. He divided the renal parenchyma into 5 segments with their own blood supply (figure 1). Many so-called aberrant and accessory vessels are normal segmental vessels with precocious origin.

Stewart[17] reported a series of 100 cases of partial nephrectomy for stone. He emphasized the value of partial resection of the kidney in the presence of calculus and pointed out that pelvio- or nephrolithotomy may not remove the focus, since calculi recur in 15 to 30 per cent of these patients. Semb[18] and others described this procedure for localized renal tuberculosis in which a segment of the kidney was removed.

In 1937 extensive experimentation on the kidneys of dogs was performed by Lands and me,[19] utilizing various types of operation. These experiments enabled us to determine the effect of trauma, the best method of resection, and the most effective method of producing hemostasis, and to observe the process of healing.

Various types of closure were utilized. We found bleeding was most effectively arrested if individual vessels were ligated as the resection



INTRARENAL ARTERIES AND KIDNEY RESECTION 133

hilum of the kidney into an anterior and posterior division.

The *anterior division* gives rise to the upper, middle, and lower segmental arteries, and the apical segment artery usually arises from it.

The *posterior division* continues and supplies only the posterior segment, but it may give origin to the artery to the apical segment.

whose origin is the most varied of all the segmental arteries. In order of frequency, it arises from the short trunk of the anterior division or the upper

FIG. 161.—A diagram of the left kidney showing the segments which are based on the arterial distribution. Only the apical and lower segments occupy areas on both the anterior and posterior surfaces of the kidney.

FIG. 162.—A diagram of the right kidney showing the arrangement of the arteries and the segments they supply. The artery to the apical segment is that of *Type I*. The arrangement of the remaining anterior segment arteries is that of Group I.

FIG. 1. Schematic drawing after Graves[18] revealing segmental blood supply to each kidney. Reproduced by permission from the *British Journal of Surgery*.

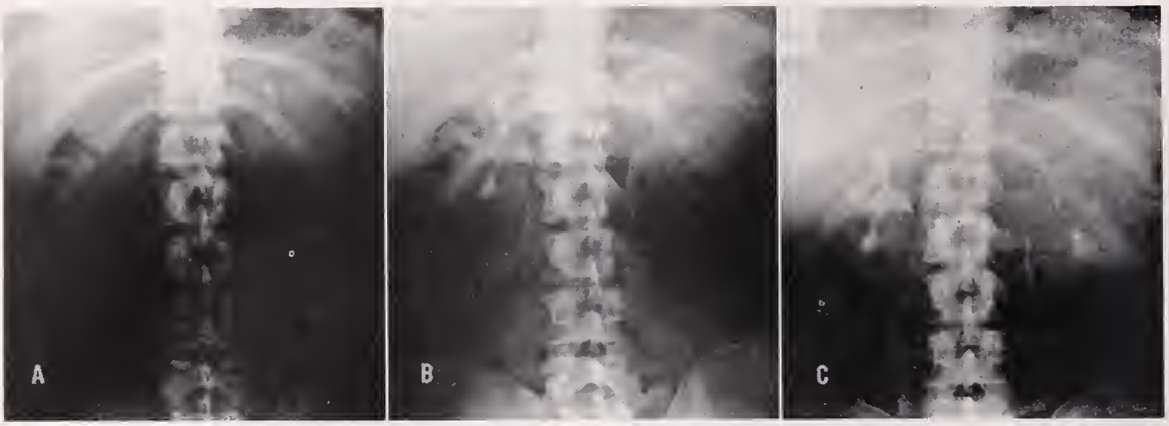


Fig. 2. (A) KUB revealing irregular-shaped opacity lying between eleventh and twelfth ribs in region of upper pole of left kidney. (B) Bilateral retrograde pyelogram revealing dilatation of left superior calyx with a secondary pyelogenic cyst embracing the stone. There was persistent pain over a period of 5 years caused by blocking of the infundibulum of the superior calyx. (C) Partial nephrectomy performed with retrograde pyelogram showing good functional recovery.

progressed. Triple or 0000 catgut on an atraumatic needle was sutured around the bleeding point, tiny pads of fat being utilized. We found little evidence of atrophy of the kidney with this technic. After decapsulation of the kidney, regeneration of the capsule was well advanced in 10 days. The new capsule was composed of fibrous tissue which encased the kidney in a tight, unyielding membrane, definitely constricting it. This was one of the strongest points in the argument against total elective decapsulation in any type of renal surgery.

Fish[20] stated that stones often recur in the same calyx (17 per cent), which indicates that an anatomic defect may account for their reformation.

Twenty of my 100 patients in which partial nephrectomy was performed were reviewed. In 10 there was obstruction by calyceal stone, 2 had massive renal cysts, and 2 had a heminephrectomy for horseshoe kidney containing stones. A calcified cyst causing profuse bleeding was found

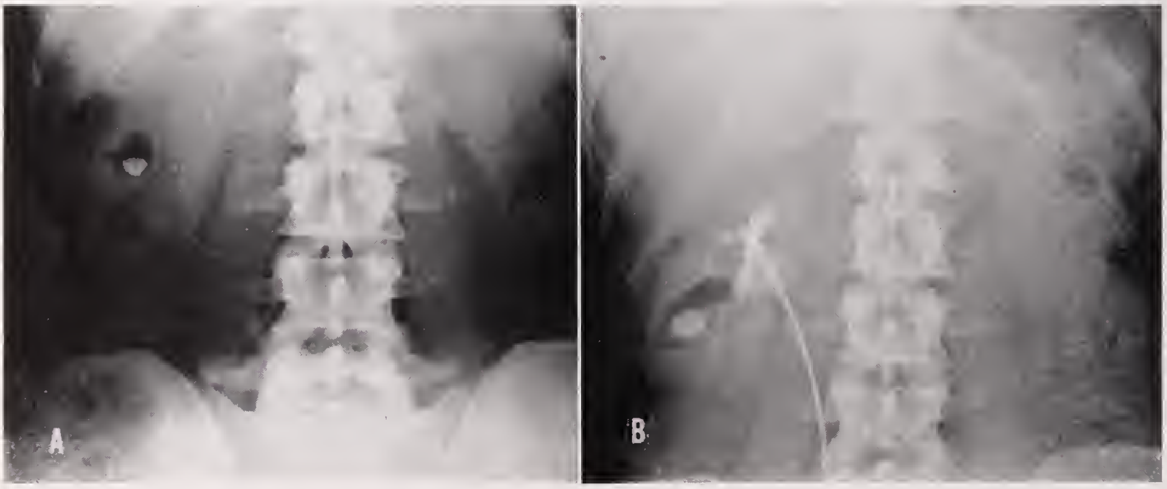


Fig. 3. (A) KUB revealing opacity within silhouette of right kidney. (B) Previously observed opacity located in lower calyx of right kidney with hydrocalycosis and narrowing of infundibulum to this calyx producing stasis. Partial nephrectomy successfully performed.

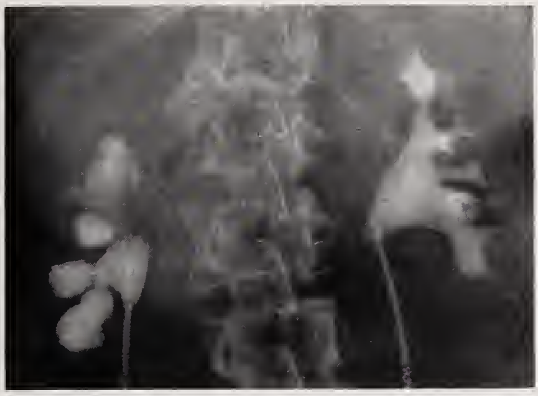


FIG. 4. Bilateral retrograde pyelogram revealing pyelogenic cyst of superior calyx of right kidney. Recurrent infection relieved by partial nephrectomy.

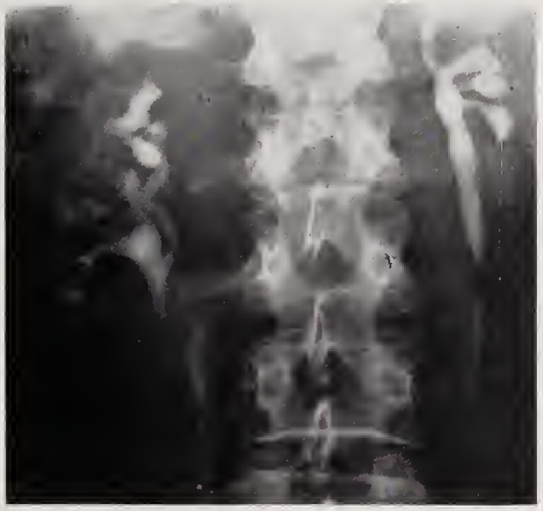


FIG. 5. Bilateral retrograde pyelogram revealing marked deformity of superior calyx of each kidney. Note tortuosity and narrowing of infundibulum producing stasis. Partial nephrectomy successfully performed.

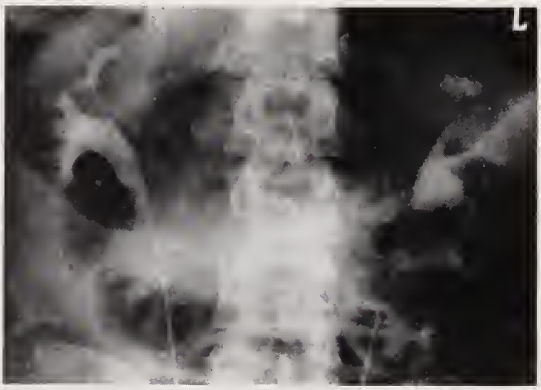


FIG. 6. Bilateral retrograde pyelogram revealing supernumerary superior calyx with narrowing of infundibulum on right, producing stasis and long-standing, recurrent infection. Partial nephrectomy successfully performed.

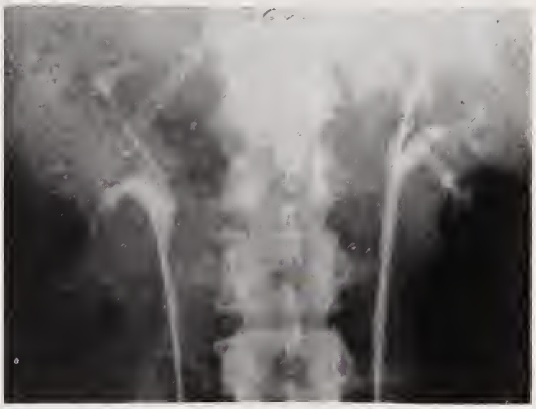


FIG. 7. Bilateral retrograde pyelogram revealing marked elongation and duplication of superior calyx of each kidney. Note long narrow infundibulum draining these calyces. Long-standing recurrent pyelonephritis was relieved by partial nephrectomy.

in 1 patient and was successfully resected. In the remaining 5 cases partial nephrectomy was utilized for congenital or other anomalies of the kidney. There were no operative deaths nor any instances of serious postoperative bleeding. A fistula was not observed, because drainage of the pelvis was not practiced. Figures 2 through 8 are illustrative of the results of partial nephrectomy in this series.

It is my belief that partial nephrectomy should be utilized more frequently in pathologic conditions limited to a segment of the kidney. This undoubtedly will lessen the recurrence of calculi and shorten postoperative morbidity. The indications are clear-cut, the technic simple, and the final results most satisfactory. I have not had any experience in resecting the kidney for tuberculosis.

SUMMARY AND CONCLUSIONS

Partial nephrectomy is a sound surgical procedure and is indicated in cases in which a poorly draining calyx has been demonstrated.

This procedure is useful in other cases in which renal tissue may be salvaged by the removal of the diseased or injured portion of the kidney.

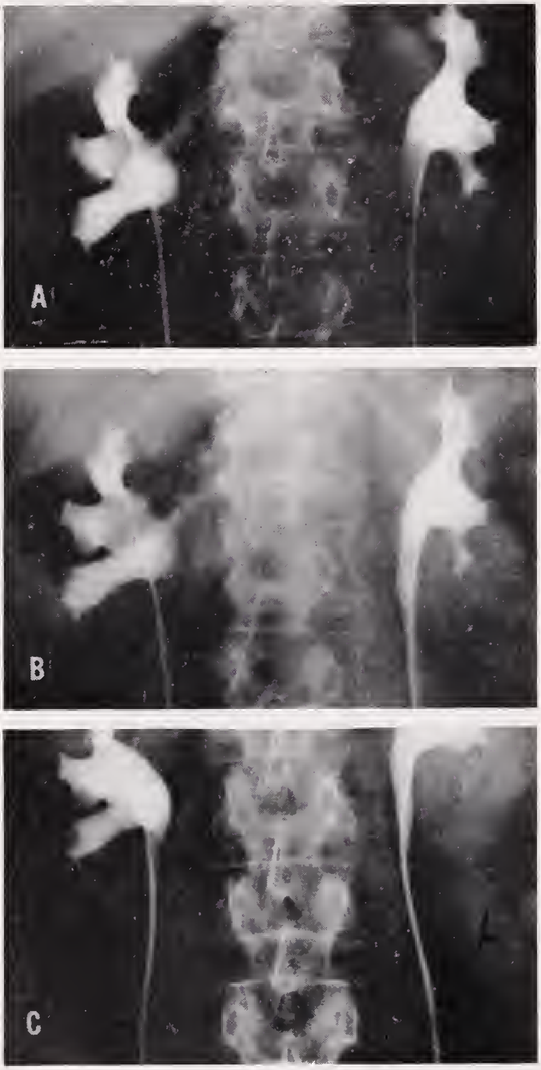


Fig. 8. (A) Case illustrating progressive cicatrizing infundibulitis of lower calyx of left kidney. Lower calyx normal. Slight pyelectasis of right pelvis with early blunting of minor calyces. (B) Retrograde pyelogram made 3 years later shows beginning narrowing of infundibulum of left lower calyx. (C) Retrograde pyelogram made 5 years following the first shows advanced cicatrization of lower calyx with stasis. Patient has had 10 or more recurrent attacks of pyelonephritis. Partial nephrectomy cured the recurrent infection.

Extensive animal experimentation shows that elective decapsulization of the kidney is a measure of temporary merit. The newly formed fibrous capsule produces severe constriction of the renal parenchyma.

Nephropexy should always be performed in conjunction with partial nephrectomy.

Clamping and suture of individual renal vessels should be practiced as the operation proceeds. Tiny pads of fat included in the suture aid in promoting hemostasis.

Twenty cases of partial nephrectomy have been reviewed and the results given. There were no deaths, and the convalescence was without incident.

BIBLIOGRAPHY

1. Smith, E. C., and Orkin, L. A.: J. Urol., 1945, **53,** 11.
2. Campbell, M., editor: Urology. Philadelphia: Saunders, 1954, **1,** 295.
3. Dees, J. E.: J. Urol., 1941, **46,** 659.
4. Pohlman, A. G.: Am. Med., 1904, **7,** 987.
5. McKim, G. F., and Smith, P. G.: J. Urol., 1924, **12,** 635.
6. Harpster, C. M., Brown, T. H., and Delcher, A.: Ibid., 1924, **11,** 157.
7. Narath, P. A.: Renal Pelvis and Ureter. New York: Grune, 1951, **1,** 11.
8. Narath, P. A.: J. Urol., 1940, **43,** 145.
9. Woodside, J. A.: Brit. M. J., 1942, **1,** 733.
10. Walmsley, cited by Woodside.[9]
11. Fetter, T. R., and Smith, B.: J. Urol., 1950, **63,** 403.
12. Stirling, W. C.: Urol. & Cutan. Rev., 1942, **46,** 703.
13. O'Conor, V. J.: Tr. Am. A. Genito-Urin. Surgeons, 1935, **28,** 83.
14. Prather, G. C.: J. Urol., 1941, **45,** 55.
15. Hess, E., Roth, R. B., Kaminsky, A. F., and Swick, H. V.: Ibid., 1950, **64,** 175.
16. Graves, F. T.: Brit. J. Surg., 1954, **42,** 132.
17. Stewart, H. H.: Ann. Roy. Coll. Surgeons, England, 1952, **11,** 32.
18. Semb, C.: Acta chir. Scandinav., 1949, **98,** 457.
19. Stirling, W. C., and Lands, A. M.: J. Urol., 1937, **37,** 466.
20. Fish, G. W.: Ibid., 1946, **56,** 375.

THE CHEMOTHERAPY OF TUBERCULOSIS*

Part II. Practical Aspects

SOL KATZ, M.D., F.A.C.P.

Chief of the Division of Pulmonary Diseases, District of Columbia General Hospital; Adjunct Clinical Professor of Medicine, Georgetown University and George Washington University Schools of Medicine

FROM WHAT has been said in Part I of this essay it is apparent that antituberculous chemotherapy may be definitive and resolution almost complete for lesions of recent onset in which lung destruction is minimal or absent. In some patients with more chronic disease without excessive pulmonary structural changes chemotherapy may also be definitive requiring, however, extremely prolonged use before accomplishing control of the disease. In a second group of individuals chemotherapy is adjunctive to surgical resection. The pulmonary changes are more extensive and irreversible, being associated with caseation, fibrosis and cavitation. Drug therapy in these patients is used to control the acute elements of disease, prevent spread of infection from cavities or caseonecrotic areas, provoke a clinical response with amelioration of symptoms of toxicity, and permit the inherent body forces of resistance to inhibit the tubercle bacilli—all in preparation for suitable surgical therapy aimed at removing residual necrotic foci and cavities.

ANTITUBERCULOUS DRUGS

Although many antituberculous agents have been introduced in the past 10 years, the "perfect drug" has yet to be found. Ebert[50] has postulated the properties of an ideal drug. It should be bactericidal or bacteriostatic in low concentrations and should accomplish this without the development of bacterial resistance. The drug should be highly diffusible and able to penetrate avascular necrotic foci in high concentrations. Because of the intracellular location of many tubercle bacilli a useful drug must be able to penetrate the cell membrane. Furthermore, it must be effective in many biochemical environments, especially those which exist in necrotic foci. In addition, it must be active against organisms which are actively dividing or in a resting state. Finally, it must be stable, maintain prolonged therapeutic blood levels, and exhibit low toxicity even when given for prolonged periods. To these criteria there should be added acceptability of the medication to the patient, which means oral administration and reasonable cost.

Streptomycin. A number of antimycobacterial agents have been used in the past, but effective therapy can be said to have begun with the discovery of streptomycin (SM) in 1944 by Schatz, Bugie and Waksman.[51] Although there are many interesting historical aspects in the development and evaluation of streptomycin, the large scale, meticulously organized studies of the Veterans Administration and Medical Research Council are responsible for much of the knowledge regarding proper dosage, toxicity and development of organism resistance.

It soon became apparent that the daily use of streptomycin alone resulted in a striking clinical improvement on the course of tuberculosis but was of limited value because of the rapid development of bacterial resistance as well as the alarming incidence of toxicity. There was good evidence that the emergence of tubercle bacilli resistant to streptomycin meant a loss of therapeutic effectiveness, since SM-resistant tubercle bacilli were virulent and capable of causing clinical deterioration. With the reduction of dosage from 2 Gm. daily to 0.5 Gm. daily it became apparent that clinical effectiveness was unchanged and that organism resistance developed at the same pace but that drug toxicity was markedly decreased.[52] Because of the toxic effect of streptomycin on the vestibular branch of the eighth nerve, dihydrostreptomycin (DHSM) was introduced.[53, 54] Although found to be equally as effective as streptomycin and to cause less vestibular damage, it produced a prohibitive incidence of irreversible eighth nerve deafness.[55, 56] The combination of streptomycin and dihydrostreptomycin in half proportions, recently introduced for the purpose of obtaining the therapeutic effect of both while avoiding the toxic effects of either, is still in the process of being evaluated but appears to hold some promise when long-term daily streptomycin therapy is required.[57, 58] Streptomycin administered twice weekly, although effective and of low toxicity, still results in significant emergence of resistant tubercle bacilli.

---

* This is the fourth of a series of comprehensive reference articles on topics of current medical interest prepared by invitation for the MEDICAL ANNALS. It is being published in two parts, of which this is Part II. Part I appeared in the February, 1956 issue.

Para-aminosalicylic acid (PAS) and combined treatment with streptomycin. Lehmann[59] introduced para-aminosalicylic acid in 1946, and studies indicated that when used alone it had only mild clinical effect and provoked annoying gastrointestinal toxicity, such as anorexia, abdominal cramps, nausea, vomiting and diarrhea. Hypersensitivity reactions may also occur requiring desensitization with gradually increasing doses. In an attempt to ascertain whether simultaneous use of streptomycin and PAS provided some additive therapeutic efficacy, it was discovered that this combined therapy was not only more effective than the use of either agent alone but also resulted in a markedly reduced incidence as well as delayed development of bacterial resistance to streptomycin.[60-64] Because of this, the combination of streptomycin and PAS became the regimen of choice.

Other developments soon followed when it was shown[65] that 1 Gm. of streptomycin administered twice weekly along with 12 Gm. of PAS daily was no less effective than daily streptomycin and daily PAS. However, the intermittent streptomycin regimen prolonged bacterial sensitivity and decreased the danger of accumulative drug toxicity. It also became apparent that long-term therapy was far superior to treatment for only 120 days and that interruptions in therapy increased bacterial resistance.[66, 67, 68]

Para-aminosalicylic acid is usually administered as the sodium salt. Many preparations are available, including calcium and potassium salts as well as a resin absorbed form. They have been used in an attempt to decrease the undesirable gastrointestinal manifestations of sodium-PAS. However, although all are about equally toxic, an individual patient may tolerate one form better than another. The salts of PAS are heavier than the acid; for example, 16.5 Gm. of sodium-PAS equals 12 Gm. of PAS. The dose of PAS refers to the acid and not to the salt. In patients who are very ill and cannot take oral medication a lyophilized form of PAS can be given parenterally.

Isoniazid (INH). With the introduction of isoniazid (isonicotinic acid hydrazide) in 1952 the most powerful single drug used in the therapy of tuberculosis appeared. Although it is effective when used alone, the appearance of isoniazid-resistant organisms occurs more frequently and more rapidly than when isoniazid is combined with either streptomycin or PAS. However, in some forms of reversible pulmonary tuberculosis isoniazid therapy alone accomplished control of the disease process with sputum conversion and striking clinical and X-ray improvement.[69] It seemed possible, then, that in certain circumstances isoniazid alone was effective and overcame the disease state before resistant organisms could appear. Furthermore, it soon developed that the presence of INH-resistant organisms did not necessarily indicate a loss of clinical effectiveness as was the case with streptomycin-resistant tubercle bacilli. A most interesting observation was the fact that isoniazid-resistant tubercle bacilli which were developed in vitro in the laboratory or in vivo during isoniazid therapy were often avirulent for guinea pigs.[70, 71, 72] This loss of virulence for guinea pigs provoked immediate conjecture concerning the pathogenicity of isoniazid-resistant mutants for humans. Observations have been made which indicate that exacerbations of disease and even fatal tuberculosis may occur in patients as a result of isoniazid-resistant organisms.[73, 74, 75] Some observers[76, 77] demonstrated that the loss of virulence of isoniazid-resistant tubercle bacilli showed a striking correlation with their loss of catalase activity. In other words, in general, catalase-positive isoniazid-resistant mutants were pathogenic for guinea pigs, whereas the catalase-negative resistant organisms were relatively nonpathogenic. It was also shown that isoniazid-resistant tubercle bacilli possessed different growth requirements, biochemical reactions, and even staining properties.[76, 77, 78]

Even though isoniazid used alone is therapeutically effective in some cases, clinical results are superior when it is combined with either PAS or streptomycin or both. The usual dose of isoniazid is 5 mg. per Kg. per day given in 2 or 3 divided doses. The average adult receives 300 mg. a day. There is no evidence that massive doses are more effective than average doses. A United States Public Health Service study[79] employing isoniazid at a dose of 10 mg. per Kg. per day found that it was no more effective than regimens using 3 mg. per Kg. per day and that toxicity was significantly greater. Oestreicher and associates[80] indicated, however, that the incidence of emergence of catalase-positive mutants has been markedly reduced only with doses of isoniazid above the usual 5 mg. per Kg. per day from the onset of therapy.

Many toxic effects have been reported from isoniazid, but when average doses are used less than 1 per cent of cases require discontinuance of the drug because of significant reactions. Neurotoxicity is most often observed in the form of peripheral neuritis, psychoses and convulsions.[81–84] They are rarely noted with doses of 300 mg. per day except for convulsions, which may occur on this dose in patients who have an underlying convulsive state such as epilepsy. Pyridoxine (vitamin B_6) deficiency has been noted when high doses of isoniazid are used.[85] For this reason supplementary doses of pyridoxine, 150 to 300 mg. a day, should be given to prevent peripheral neuritis when large doses of isoniazid are administered. Pyridoxine as well as vitamin B_{12} have been reported as effective therapy for the isoniazid-induced peripheral neuritis.[86] However, neither vitamin can be relied upon to relieve the peripheral neuritis with complete regularity.

Neither miliary tuberculosis nor tuberculous meningitis has been reported to have developed during treatment with isoniazid until recently.[87] However, in patients treated with SM-PAS these complications have been observed to appear.

Viomycin. This drug is less effective and more toxic than streptomycin.[88–91] It possesses activity against streptomycin-resistant tubercle bacilli as well as isoniazid-resistant organisms. However, its efficacy appears to be related to the quantity administered much more than with streptomycin or isoniazid. Unfortunately, daily therapeutic doses are so toxic that this regimen cannot be used, because renal damage, vestibular and auditory loss frequently follow. Hypocalcemia, hyponatremia and hypokalemia are also observed. When used at a dose of 2 Gm. twice weekly along with daily PAS it possesses definite though not striking therapeutic activity and low toxicity. The combination of intermittent viomycin and intermittent streptomycin therapy produces results comparable to intermittent streptomycin and daily PAS administration. Its major usefulness is in patients whose organisms are resistant to isoniazid and streptomycin and who require protective coverage during resectional surgery.

Pyrazinamide (*aldinamide*). Pyrazinamide is a synthetic derivative of nicotinic acid, which, when used alone, has antimycobacterial activity of short duration, presumably due to the development of resistant organisms.[92] Its main value has been for protection during surgery in patients with organisms resistant to streptomycin and isoniazid. Schwartz and Moyer[93] found that the daily use of pyrazinamide and isoniazid was extremely effective and comparable to any combination of streptomycin, isoniazid and PAS. Studies[94] in mice indicate that this combination of drugs may be as close to a true tuberculocidal regimen as had yet been achieved. More recent observations[95] have shown, however, that tubercle bacilli are present in the spleens of animals killed 90 days after therapy with pyrazinamide and isoniazid is stopped, thus indicating that this therapy was not fully eradicative. Until the question of toxicity is settled, and that refers mainly to hepatic damage, the general use of the pyrazinamide-isoniazid combination cannot be recommended. Several well-controlled studies are now in progress in an attempt to unravel the problem of hepatotoxicity.

The dose of pyrazinamide is 30 to 35 mg. per Kg. per day, with a total daily dose not to exceed 3 Gm.

Oxytetracycline (*Terramycin*). Since oxytetracycline has been shown to possess some antimycobacterial activity, several studies have been done to evaluate its usefulness as a substitute for PAS.[96–99] The results indicate that 2 Gm. of oxytetracycline daily in combination with intermittent streptomycin or daily isoniazid is a useful drug regimen for the treatment of pulmonary tuberculosis when standard drug programs cannot be used.

Cycloserine (*seromycin*). This is the latest antibiotic and is now under extensive investigation. Conflicting results regarding its efficacy have been reported.[100, 101, 102] It is striking to note its relative lack of effectiveness in tuberculosis in mice and guinea pigs. One of its definite effects is alarming neurotoxicity. Grand mal seizures, twitchings and psychoses have been observed with distressing frequency.

Other drugs. Iproniazid (isopropyl derivative of INH), although it possesses antituberculous activity, is so neurotoxic that it is no longer used. Tibione, a thiosemicarbazone derivative, because of a low efficacy and high toxicity has shown nothing to justify the initial enthusiasm it provoked. The sulfones have demonstrated a greater effect in animals than in humans and were formerly used by some along with streptomycin in the management of tuberculous meningitis before isoniazid became available. Neomycin has antimycobacterial action in vivo and in vitro but is too nephrotoxic and ototoxic for prolonged use. Salizid[103] has the same therapeutic efficacy as isoniazid but is less neurotoxic and can often be used in patients who have developed peripheral neuritis while receiving isoniazid. Hinconstarch, a combination of a thiosemicarbazone and a hydrazide, is now under investigation. It shows some promise of activity against isoniazid-resistant tubercle bacilli. Streptomycylidine isonicotinyl hydrazine sulfate (Streptohydrazide), a weak-bonded chemical combination of streptomycin and isoniazid, has no superiority over streptomycin and isoniazid and has the disadvantage of not permitting separate dosage regulation of each drug.

The Use of Chemotherapy in Practice

Antituberculous chemotherapy should be administered to all patients who have active tuberculosis regardless of extent. Furthermore, such treatment should be instituted promptly in an attempt to capture the lesion in its most reversible state. There is still some question regarding the advisability of chemotherapy in recent infection which has as its only manifestation a positive tuberculin test. Controlled studies are now in progress to assess the value of chemotherapy in this situation to prevent the manifestations of progressive primary tuberculosis, hematogenous tuberculosis, and future endogenous reactivation. Obviously, it will require many years for complete evaluation. Tuberculous meningitis and miliary tuberculosis are the most serious complications of primary tuberculosis and tend to occur within the first 6 months after tuberculin conversion. Since approximately 5 to 10 per cent of infants under the age of 2 develop hematogenous dissemination, and since there is evidence that isoniazid may prevent these serious complications, there would appear to be adequate rationale for the prophylactic use of isoniazid in this group.

Regimens. The standard regimens in the therapy of tuberculosis involve the use of streptomycin, isoniazid and PAS. The Committee on Therapy of the American Trudeau Society[104] lists the following basic treatment schedules:

1. Streptomycin-PAS: 1.0 Gm. streptomycin intramuscularly 2 or 3 times weekly and 12 Gm. of PAS daily by mouth in 3 or 4 divided doses.
2. Isoniazid alone: 5 mg. per Kg. per day in 2 or 3 divided doses.
3. Isoniazid-streptomycin (both daily): isoniazid 5 mg./Kg./day and 1.0 Gm. of streptomycin intramuscularly.
4. Isoniazid daily–streptomycin twice weekly: same dosage as in schedule 3, but streptomycin given twice weekly instead of daily.
5. Isoniazid-PAS: isoniazid 5 mg./Kg./day and 12 Gm. of PAS daily.
6. Isoniazid-streptomycin-PAS: each in dosage as above; streptomycin given daily or twice weekly.

The report indicates that regimens 1 and 2, streptomycin-PAS and isoniazid alone are less effective than the other schedules. Regimens 3 to 6 are about equally effective, and the exact choice among these is impossible on present evidence. Isoniazid should be included in the management of the more dangerous forms of tuberculosis such as miliary, meningeal and acute extensive pneumonic tuberculosis. However, in less severe forms of tuberculosis, streptomycin-PAS is still acceptable therapy. As a matter of fact, some think that streptomycin and isoniazid should not be used concurrently except in the very seriously ill because of the danger of losing the effectiveness of one or both of these agents by the development of resistant organisms. It is suggested that either be combined with PAS in order to keep one powerful antituberculous drug in reserve.

Because of the frequent intolerance to PAS and the great acceptability of isoniazid there has been a natural tendency to select streptomycin and isoniazid as the regimen of choice. However, consideration should be given to the age of the tuberculosis and the pathologic type being treated. In patients with early disease with predominantly reversible elements or in whom surgery is contemplated within 6 to 12 months to remove a residual necrotic focus, streptomycin and isoniazid is excellent treatment and there is little worry regarding the development of resistant organisms. On the other hand, in patients with chronic disease with irreversible elements who will require very prolonged medical therapy, streptomycin-PAS or preferably isoniazid-PAS would be more desirable. Studies of the United States Public Health Service[79] indicate that, when therapy with streptomycin-isoniazid is prolonged, resistance to both drugs may be expected to develop. This would have an obvious disadvantage if surgery had to be performed in the presence of such resistant organisms.

Streptomycin-isoniazid-PAS, so-called triple drug therapy, would appear to offer no advantage compared with streptomycin-isoniazid or isoniazid-PAS from the therapeutic, roentgenographic or bacteriologic viewpoints. In addition, intolerance is encountered most frequently with the triple-drug regimen.

In general then, streptomycin-isoniazid and isoniazid-PAS are the most effective regimens, and there is little to indicate which of these combinations should be selected except perhaps on the basis of morphology of the disease process and anticipated duration of therapy. A recent study[105] suggests that streptomycin-isoniazid with streptomycin given daily is more effective than when streptomycin is used twice weekly. Presently, however, in this country at least, the daily use of both streptomycin and isoniazid has not attained the popularity of intermittent streptomycin and daily isoniazid.

Isoniazid alone, although effective in some types of tuberculosis, is not generally recommended, except perhaps in the treatment of the recent tuberculin reactor.

Duration of chemotherapy. The optimum duration of therapy has not yet been accurately defined. However, in view of the chronicity of tuberculosis, the tendency toward necrosis, and the failure of chemotherapy to eradicate tubercle bacilli, it is understandable why chemotherapy must be maintained for long periods. Most patients who received chemotherapy as a definitive measure are treated for at least 6 months after the lesions are stable roentgenographically, cavities are closed by tomography, and sputum or gastric washings are consistently negative for tubercle bacilli by culture. This means that therapy is continued for at least 1 year and more often for 18 months or longer. Since relapse is more likely to occur in the first 2 or 3 years after the tuberculosis is presumed to be under control, and since the optimal duration of drug treatment is not known, it has been suggested that chemotherapy under close supervision should be prolonged indefinitely except when serious toxic reactions ensue or until experience provides an indicator for the termination of therapy.[106]

Although chemotherapy is the keystone in the treatment of tuberculosis, it must be "dovetailed" with the other therapeutic measures such as bed rest and surgical procedures. Finally, one must emphasize that "the secret to the successful management of the patient with pulmonary tuberculosis lies not in any one drug, nor in any one surgical feat, nor in any one therapeutic dictum, but in the carefully planned and integrated use of all these many measures under the joint supervision of the internist, bacteriologist and surgeon working with the closest possible coördination."[107]

The following roentgenograms illustrate the beneficial effects of chemotherapy.

BIBLIOGRAPHY

50. Ebert, R. H.: Present status of chemotherapy of tuberculosis. Am. J. Med., 1955, **18**, 738.
51. Schatz, A., Bugie, E., and Waksman, S. A.: Streptomycin, a substance exhibiting antibiotic activity against gram-positive and gram-negative bacteria. Proc. Soc. Exper. Biol. & Med., 1944, **55**, 66.
52. U. S. Veterans Administration: Streptomycin in treatment of tuberculosis; current status; report to Council on Pharmacy and Chemistry. J.A.M.A., 1948, **138**, 584.
53. Donovick, R., and Rake, G.: Studies on some biological aspects of dihydrostreptomycin. J. Bact., 1947, **53**, 205.
54. Hobson, L. B., Tomsett, R., Muschenheim, C., and McDermott, W.: Laboratory and clinical investigation of dihydrostreptomycin. Am. Rev. Tuberc., 1948, **58**, 501.
55. Glorig, A., Romansky, M., and Katz, S.: Interim report of toxicity of dihydrostreptomycin for auditory division of the eighth cranial nerve, in U. S. Veterans Administration: Tr. 10th Conference on Chemotherapy of Tuberculosis (Streptomycin Conference), held January 25–28, 1951, in Atlanta, Ga., p. 227.
56. O'Connor, J. B., Christie, F. J., and Howlett, K. S., Jr.: Neurotoxicity of dihydrostreptomycin. Am. Rev. Tuberc., 1951, **63**, 312.
57. Hobson, L. B., Lynch, W., and Hinshaw, H. C.: Further experiences with mixture of streptomycin and dihydrostreptomycin in pulmonary tuberculosis, in U. S. Veterans Administration: Tr. 13th Conference on Chemotherapy of Tuberculosis, held February 8–11, 1954, in St. Louis, Mo., p. 376.
58. Shubin, H., Heiken, C. A., Glaskin, A., Pennes, E., Chakravarty, S., and Rutberg, F.: Study of neurotoxicity of streptoduocin on tuberculous patients. Dis. Chest., 1955, **28**, 447.
59. Lehmann, J.: Para-aminosalicylic acid in treatment of tuberculosis. Lancet, 1946, **1**, 15.
60. Medical Research Council, report to, by Tuberculosis Chemotherapy Trials Committee: Treatment of pulmonary tuberculosis with streptomycin and para-aminosalicylic acid. Brit. M. J., 1950, **2**, 1073.
61. Bloch, R. G., Vennesland, K., Ebert, R. H., and Gomori, G.: Effect of streptomycin-para-aminosalicylic acid and their combination on the tubercle bacillus in vitro and in vivo. Am. Rev. Tuberc., 1949, **59**, 554.
62. Karlson, A. G., Pfuetze, K. H., Carr, D. T., Feldman, W. H., and Hinshaw, H. C.: Effect of combined therapy with streptomycin, para-aminosalicylic acid and promin on emergence of resistant strains of tubercle bacilli; preliminary report. Proc. Staff Meet., Mayo Clin., 1949, **24**, 85.

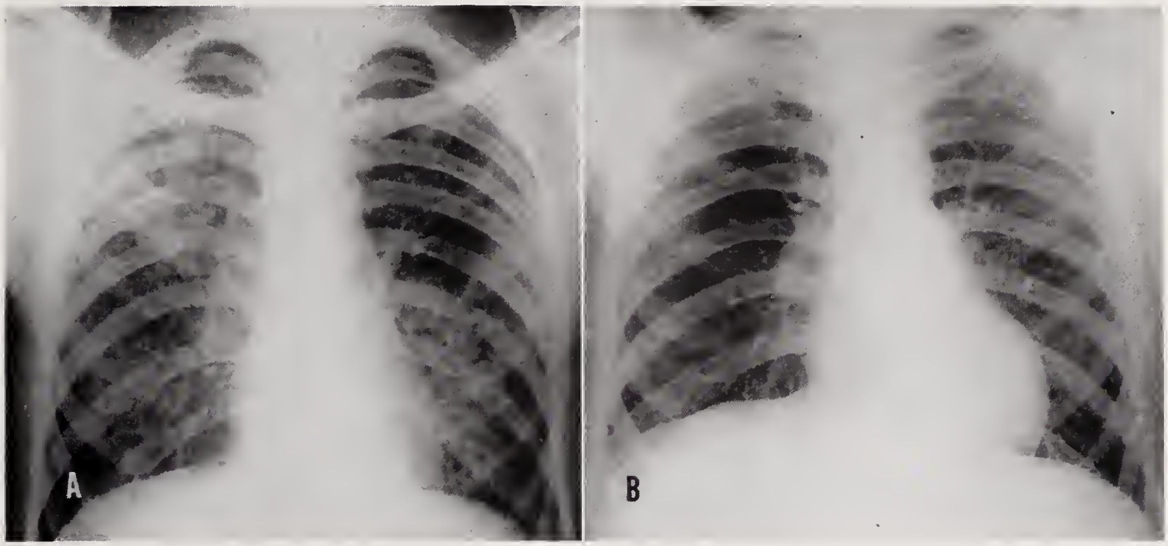


Fig. 1. (A) Diffuse bilateral predominantly exudative tuberculosis of recent origin. (B) Six months after treatment with intermittent streptomycin and daily isoniazid. There have been marked clearing, symptomatic improvement and sputum conversion. Residual lesions especially in right upper lobe treated by prolonged chemotherapy.

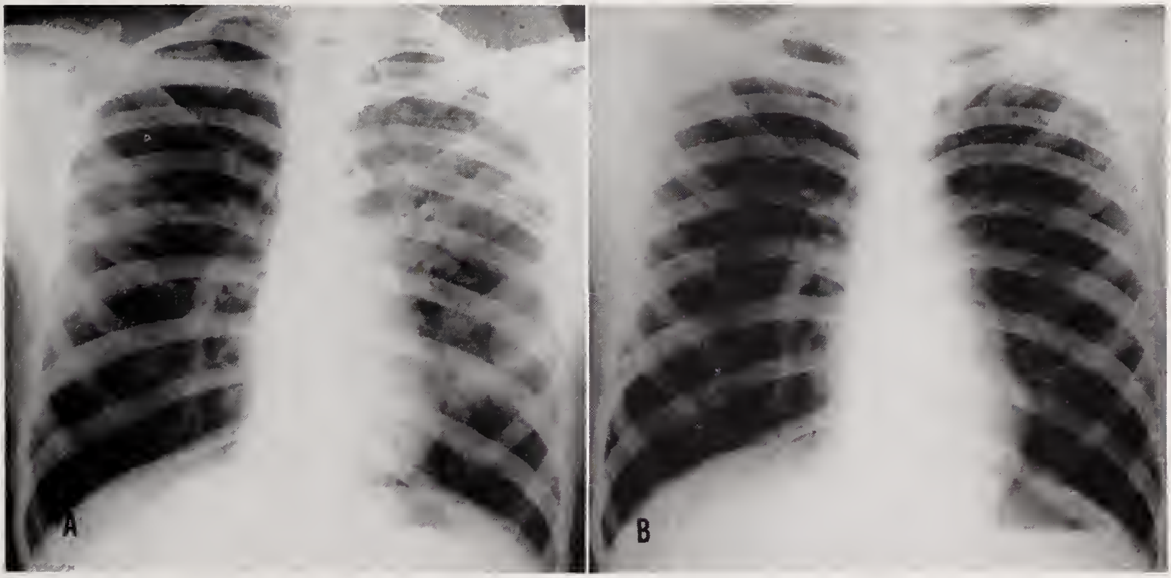


Fig. 2. (A) Bilateral mixed exudative and caseous lesions. (B) Three months after treatment with intermittent streptomycin and daily isoniazid. Marked clearing and sputum conversion. A few small necrotic foci can be seen in the left upper lobe and in the third right anterior interspace treated by prolonged chemotherapy.

63. Medical Research Council, preliminary report to, by Tuberculosis Chemotherapy Trials Committee: Treatment of pulmonary tuberculosis with para-aminosalicylic acid and streptomycin. Brit. M. J., 1949, **2**, 1521.

64. Medical Research Council, report to, by Tuberculosis Chemotherapy Trials Committee: Prevention of streptomycin resistance by combined chemotherapy. Ibid., 1952, **1**, 1157.

65. Tucker, W. B.: Controlled study of variables in chemotherapy of pulmonary tuberculosis; a critique, in U. S. Veterans Administration: Tr. 12th Conference on Chemotherapy of Tuberculosis, held February 9–12, 1953, in Atlanta, Ga., p. 13.

66. Tucker, W. B.: Review of current status of chemotherapy of tuberculosis. Ann. Int. Med., 1953, **39**, 1045.

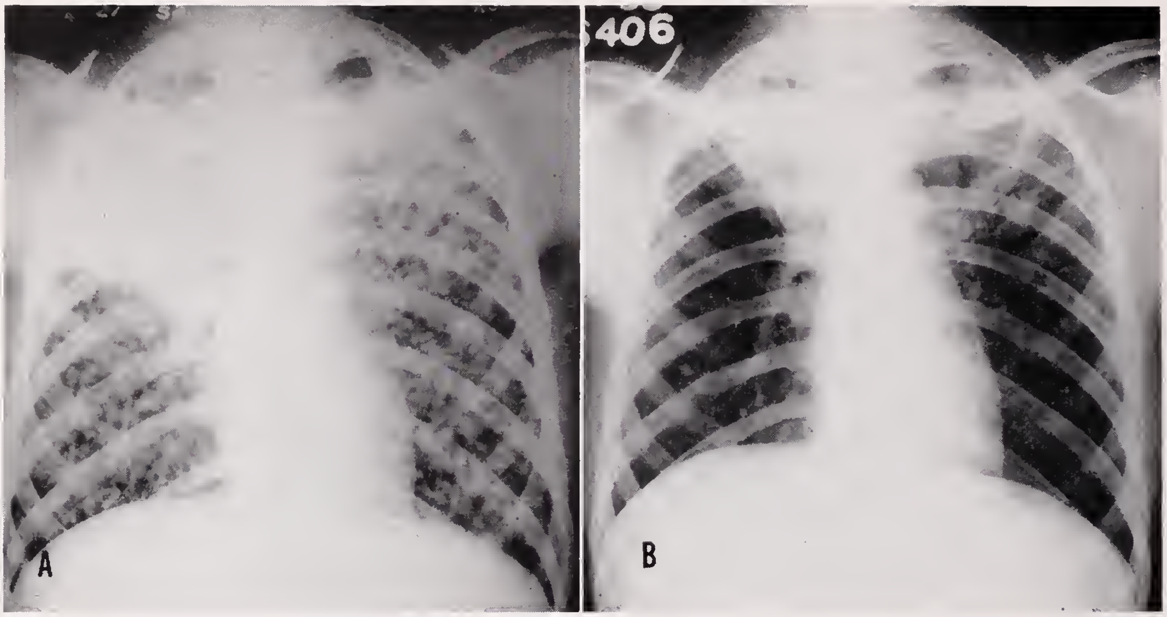


Fig. 3. (A) Acute caseous tuberculous pneumonia with severe bilateral bronchogenic spread. (B) Six months after therapy with daily Salizid and PAS. There has been marked clearing of the acute and reversible spread areas but the non-resolving and cavitary components remain. Sputum continues positive. Markedly impaired pulmonary function precludes resectional surgery in the future. Prolonged chemotherapy has kept the disease under control and the sputum negative.

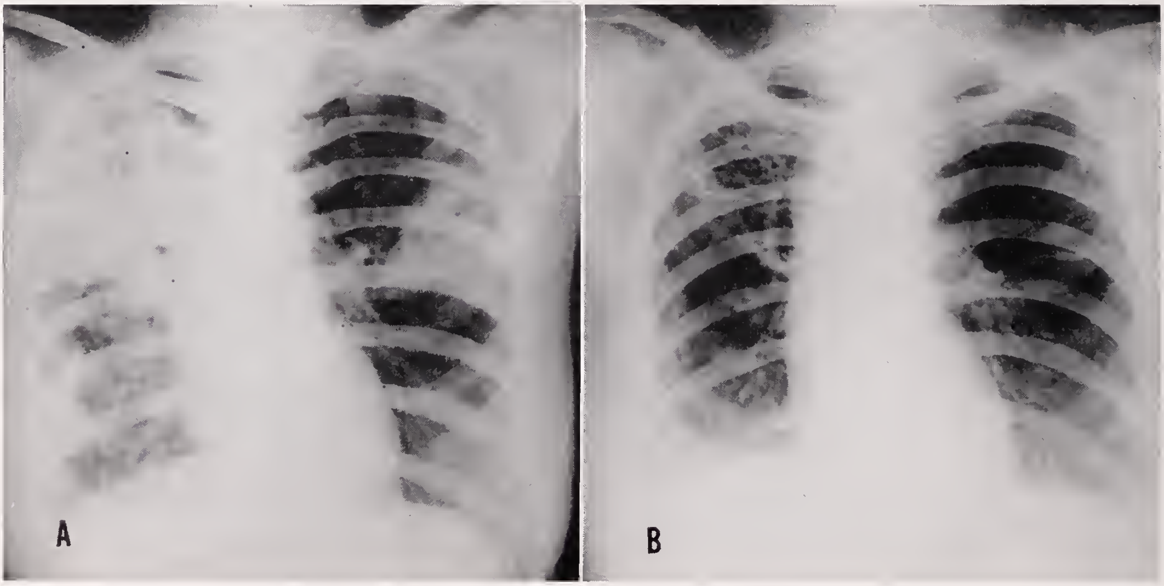


Fig. 4. (A) Bilateral caseocavernous tuberculous. (B) Five months after chemotherapy with streptomycin and PAS, bilateral cavitation remains. Bilateral resectional surgery performed at a later date.

---

67. D'Esopo, N. D.: Prolonged chemotherapy of pulmonary tuberculosis; preliminary report, in U. S. Veterans Administration: Tr. 8th Conference on Chemotherapy of Tuberculosis, held November 10, 1949, in Atlanta, Ga., p. 57.

68. D'Esopo, N. D., Ryan, B. J., and Medlar, E. P.: Prolonged therapy with streptomycin and PAS; clinical-pathological correlation, in U. S. Veterans Administration: Tr. 10th Conference on Chemotherapy of Tuberculosis (Streptomycin Conference), held January 25–28, 1951, in Atlanta, Ga., p. 78.

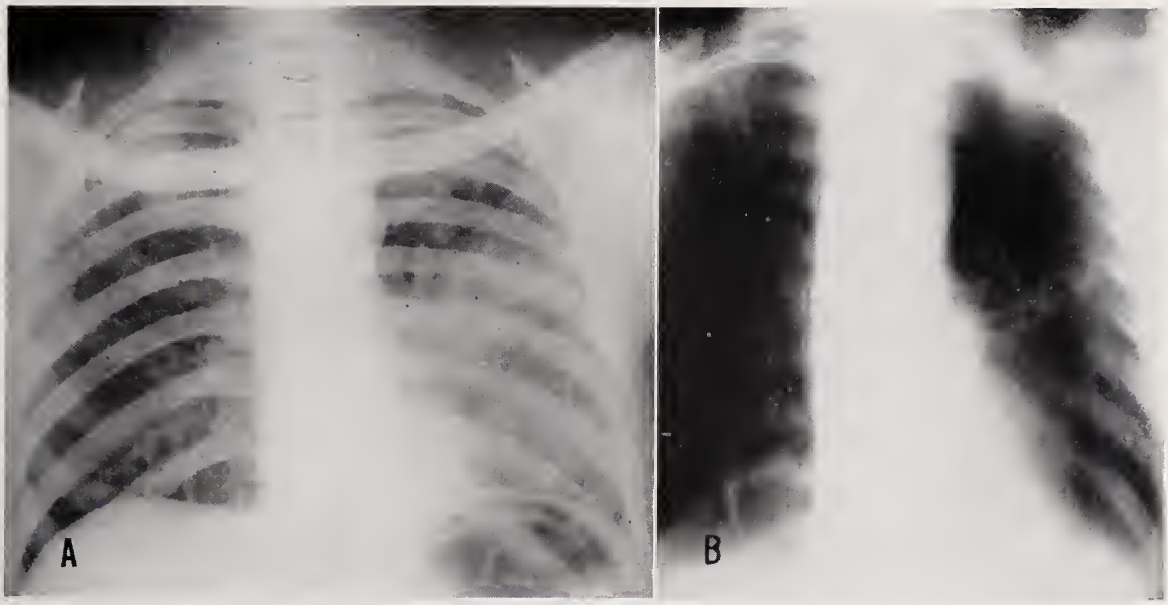


Fig. 5. (A) Bilateral exudative, caseocavitary and nodular tuberculosis. (B) Six months after therapy with intermittent streptomycin and daily Salizid, tomogram reveals residual cavitation in superior segment of left lower lobe requiring resection.

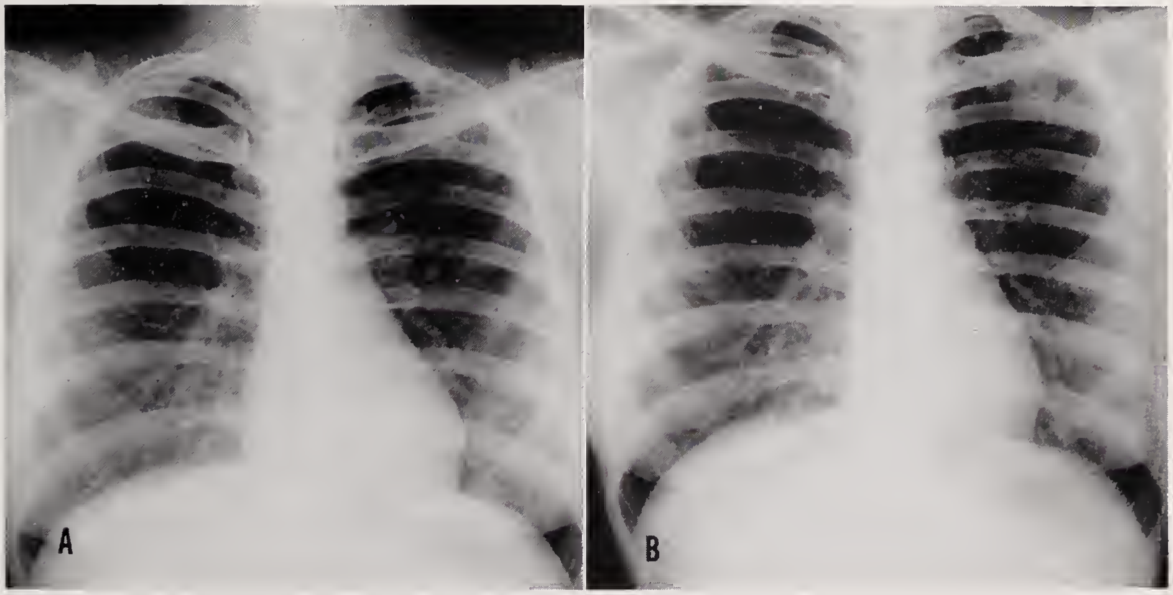


Fig. 6. (A) Residual cavitation remaining after chemotherapy. Patient refused surgery. (B) Filled-in cavity 6 months later successfully treated by resection of apicoposterior segment.

69. Deuschle, K., Ormond, L., Elmendorf, D., Jr., Muschenheim, C., and McDermott, W.: Course of pulmonary tuberculosis during long term single drug (isoniazid) therapy. Am. Rev. Tuberc., 1954, **70,** 228.

70. Peizer, L. R., Widelock, D., and Klein, S.: Virulence in guinea pigs of isoniazid-resistant cultures isolated from clinical specimens. Ibid., 1953, **68,** 290.

71. Middlebrook, G., and Cohn, M. C.: Some observations on pathogenicity of isoniazid-resistant variants of tubercle bacilli. Science, 1953, **118,** 297.

72. Peizer, L. R., Minkin, A., and Widelock, D. A.: Further study of virulence in guinea pigs of isoniazid-resistant tubercle bacilli isolated from clinical material. Am. Rev. Tuberc., 1954, **70,** 728.

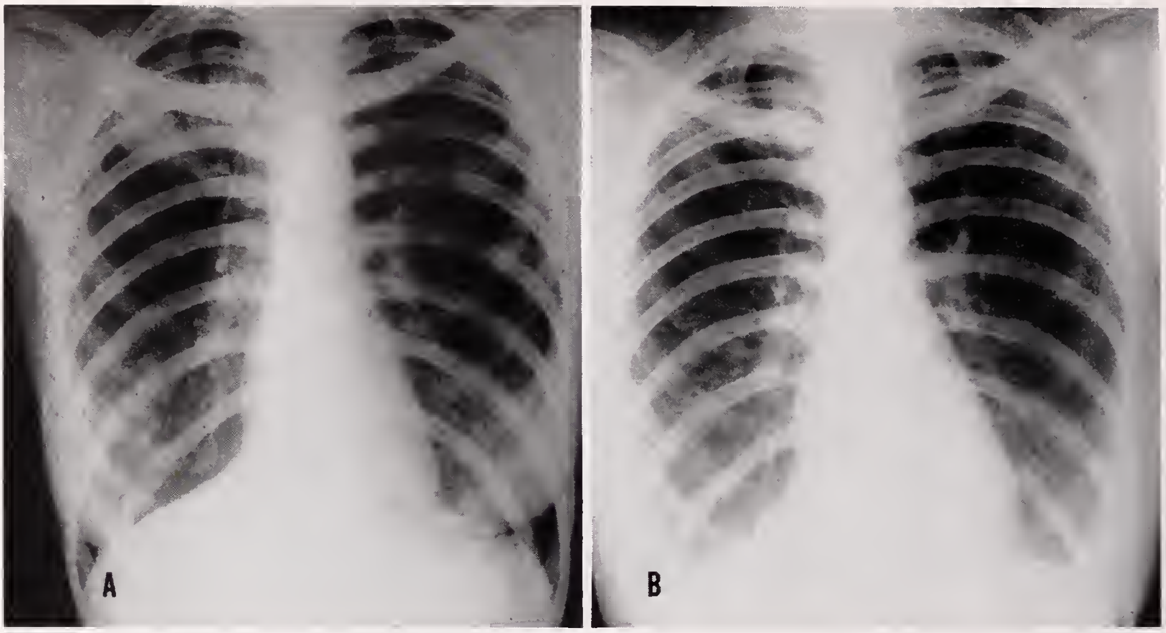


Fig. 7. (A) Bilateral chronic caseonodose tuberculosis. (B) Eight months later showing several well-defined residual necrotic lesions in the right apex and superior segment of the left lower lobe. Right apical segmental resection and wedge resection on the left successfully performed.

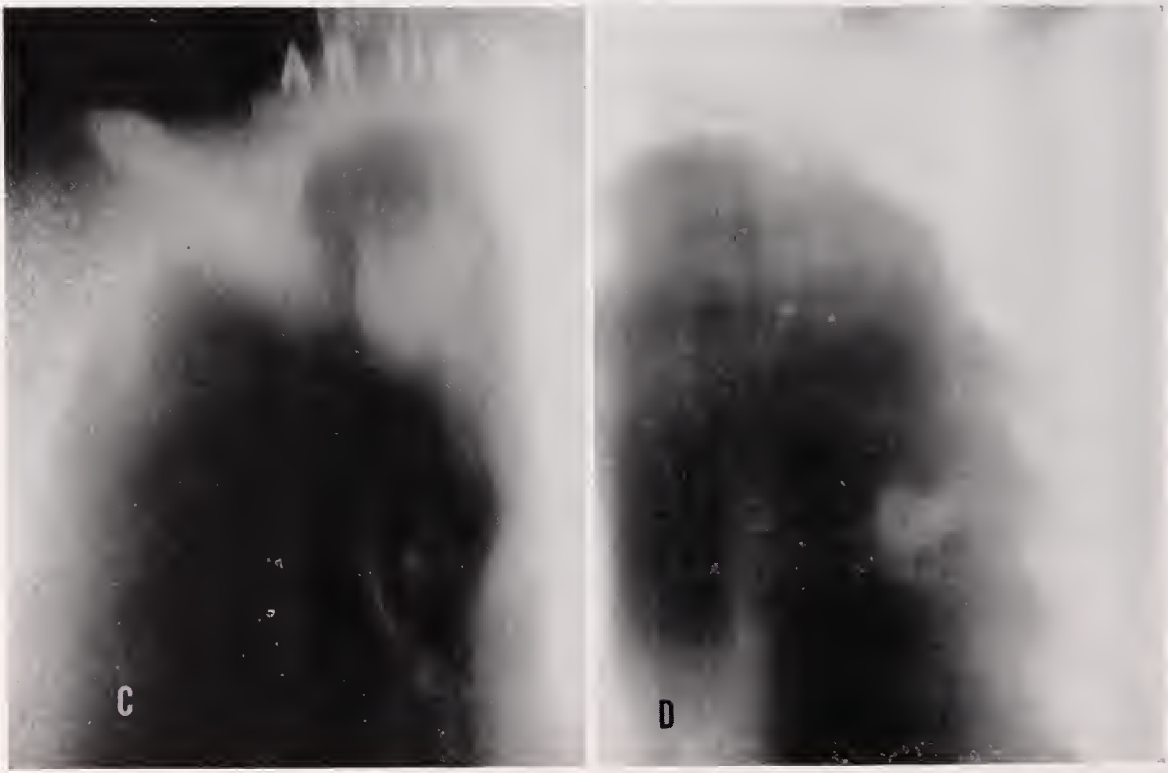


Fig. 7 (C) Tomogram shows well defined residual lesion in apex of right upper lobe. (D) Tomogram shows well defined necrotic residual with central cavitation in superior segment of left lower lobe.

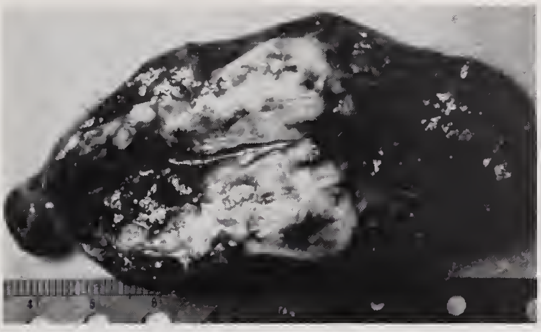


FIG. 7-E. Surgical specimen showing right apical segment containing the large necrotic focus and several satellite nodules.

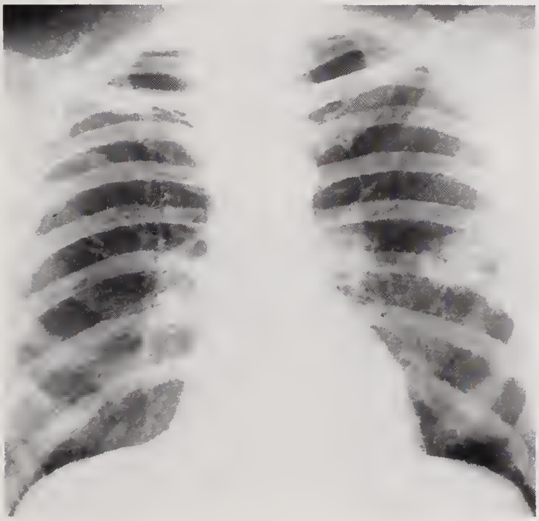


FIG. 8. Chronic fibrocavitary nodule in left lower lobe. These lesions are irreversible and are surgical problems. Wedge resection performed under protection of chemotherapy.

73. Medical Research Council, report to, by Tuberculosis Chemotherapy Trials Committee: Isoniazid in treatment of pulmonary tuberculosis. Brit. M. J., 1953, **1**, 521.
74. COHEN, A. C., AND GLINSKY, G. C.: Virulence of isoniazid-resistant tubercle bacilli in man. in U. S. Veterans Administration; Tr. 13th Conference on Chemotherapy of Tuberculosis, held February 8-11, 1954, in St. Louis, Mo., p. 161.
75. KATZ, S., STOREY, P. B., AND MCCORMICK, G.: Tuberculous pneumonia due to organisms resistant to streptomycin and isoniazid. Am. Rev. Tuberc., 1954, **70**, 881.
76. COHN, M. L., KOVITZ, C., ODA, U., AND MIDDLEBROOK, G.: Studies on isoniazid and tubercle bacilli. II. Growth requirements, catalase activities and pathogenic properties of isoniazid-resistant mutants. Ibid., 1954, **70**, 641.

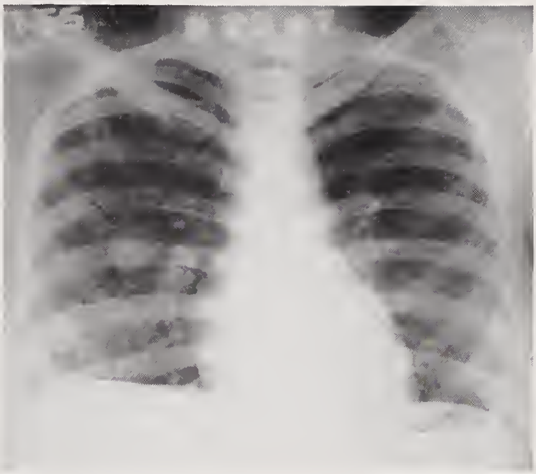


FIG. 9. Chronic fibrocaseous nodule (tuberculoma) treated by wedge resection.

77. MITCHISON, D. A.: Tubercle bacilli resistant to isoniazid. Brit. M. J., 1954, **1**, 128.
78. FISHER, M.: Hemin as growth factor for certain isoniazid-resistant strains of mycobacterium tuberculosis. Am. Rev. Tuberc., 1954, **69**, 797.
79. U. S. Public Health Service Coöperative Investigation of Antimicrobial Therapy of Tuberculosis: Report on 32 week observations on combinations of isoniazid, streptomycin and para-aminosalicylic acid. Ibid., 1953, **70**, 521.
80. OESTREICHER, R., DRESSLER, S. H., RUSSELL, W. F., JR., GROW, J. B., AND MIDDLEBROOK, G.: Observations on pathogenicity of isoniazid-resistant mutants of tubercle bacilli for tuberculous patients. Ibid., 1955, **71**, 390.
81. ROBITZER, E. H., SELIKOFF, I. J., AND ORNSTEIN, G. G.: Chemotherapy of human tuberculosis with hydrazine derivatives of isonicotinic acid. Quart. Bull. Sea View Hosp., 1952, **13**, 27.
82. ELMENDORF, D. F., JR., CAWTHON, W. U., MUSCHENHEIM, C., AND MCDERMOTT, W.: Absorption, distribution excretion and short-term toxicity of isonicotinic acid hydrazide (Nydrazid) in man. Am. Rev. Tuberc., 1952, **65**, 429.
83. U. S. Public Health Service Coöperative Investigation of Antimicrobial Therapy of Tuberculosis: Progress report on therapeutic and toxic effects of combinations of isoniazid, streptomycin and para-aminosalicylic acid. Ibid., 1954, **69**, 1.
84. KATZ, S., GRUVER, R., SMITH, B., AND MCCORMICK, G.: Peripheral neuritis due to hydrazide derivatives. Dis. Chest, 1954, **26**, 1.
85. BIEHL, J. P., AND VILTER, R. W.: Effects of isoniazid on pyridoxine metabolism, in U. S. Veterans Administration; Tr. 13th Conference on Chemotherapy of Tuberculosis, held February 8-11, 1954, in St. Louis, Mo., p. 237.

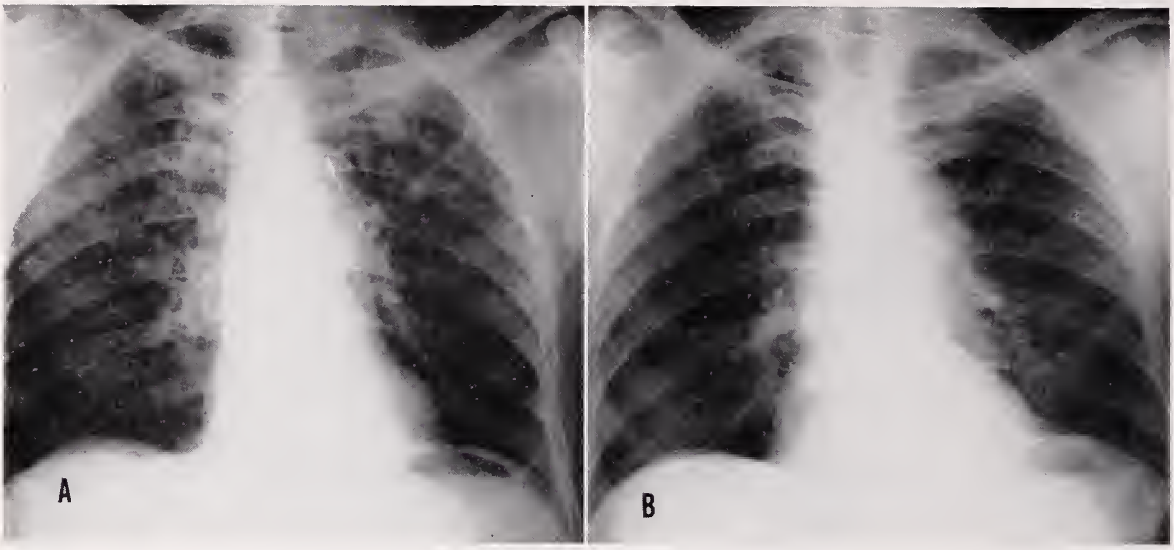


Fig. 10. (A) Chronic disseminated nodular tuberculosis with apical cavitation. (B) Seven months after therapy with intermittent streptomycin and daily PAS. There is considerable resolution of the nodular epithelioid infiltrates but the cavitary lesions remain.

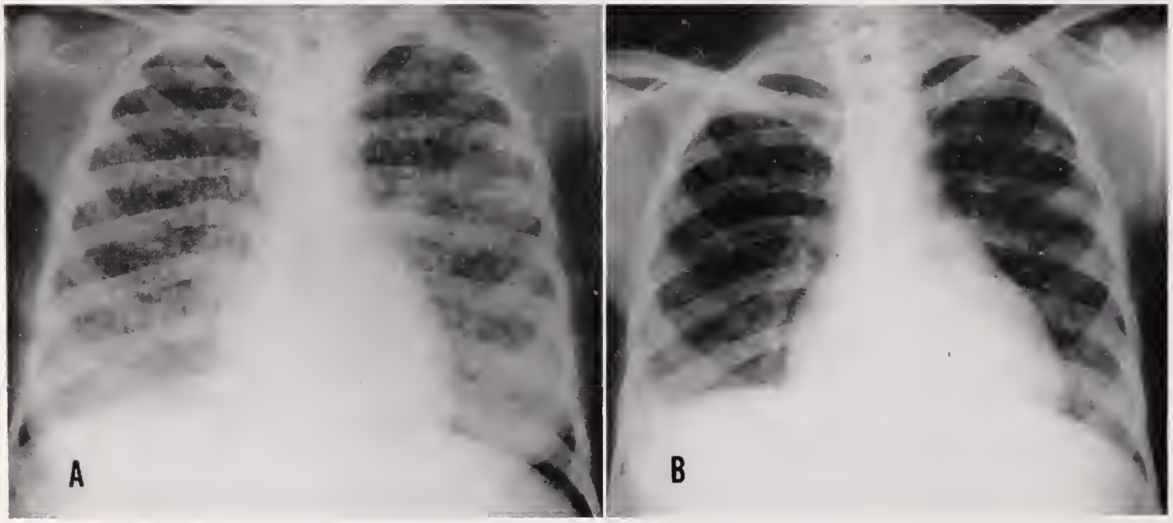


Fig. 11. (A) Acute hematogenous tuberculosis (miliary tuberculosis). (B) Roentgenogram 6 months after chemotherapy with intermittent streptomycin and daily PAS shows complete clearing. This patient was treated before isoniazid became available. Currently isoniazid is included in the drug regimen for this type of disease.

86. Longfield, A. N., and Middleton, J. W.: B_{12} in treatment of peripheral neuritis due to isoniazid. Ibid., p. 239.

87. Mitchell, R. S., Anderson, L., Ohr, I., and Middlebrook, G.: Fatal tuberculous meningitis developing during isoniazid-streptomycin therapy. Am. Rev. Tuberc., 1955, **72,** 653.

88. Bartz, Q. R., Ehrlich, J., Mold, J. D., Penner, M. A., and Smith, R. M.: Viomycin, new tuberculostatic antibiotic. Ibid., 1951, **63,** 4.

89. Hackney, R. L., King, E. Q., Marshall, E. E., Harden, K. A., and Payne, H. M.: Clinical observations on viomycin sulphate in treatment of tuberculosis. Dis. Chest, 1953, **24,** 591.

90. Adcock, J. D., Davey, W. N., Haley, R. R., Rees, R. M., and Meier, W. A.: Use of viomycin in patients with pulmonary tuberculosis. Am. Rev. Tuberc., 1954, **69,** 543.

91. Schaffeld, H. G., Garthwaite, B., and Amberson, J. B.: Viomycin therapy in human tuberculosis. Ibid., 1954, **69,** 520.

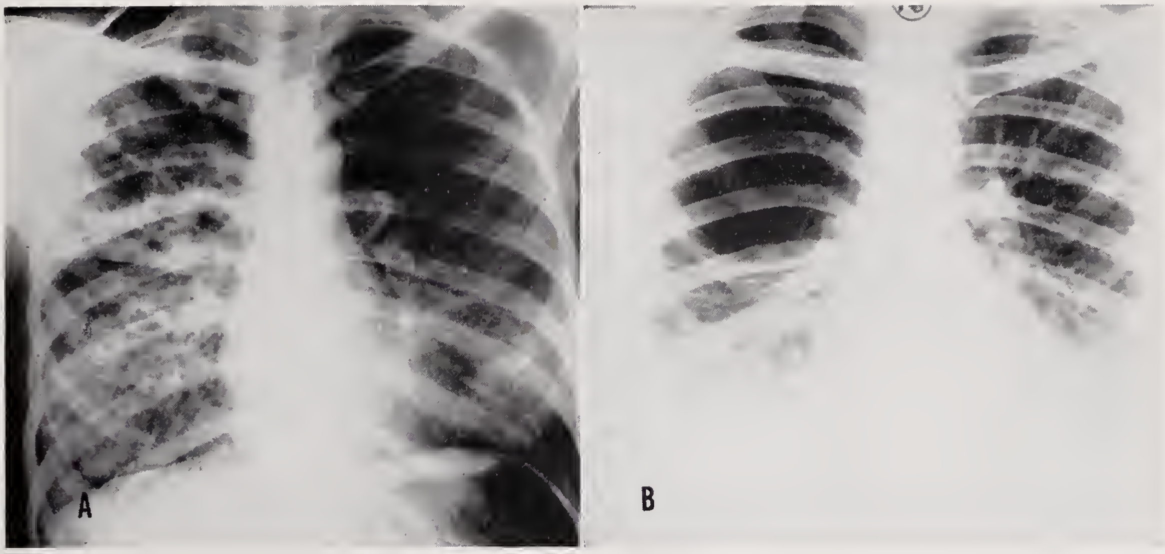


Fig. 12. (A) Bilateral caseocavernous tuberculosis with marked cavitary destruction of the right upper lobe. (B) Sixteen months after treatment with streptomycin and isoniazid. There is a huge "bullous cavity" occupying the right upper lobe.

92. Yeager, R. L., Munroe, W. G. C., and Desson, F. I.: Pyrazinamide (aldinamide) in treatment of pulmonary tuberculosis. Ibid., 1952, **65**, 523.

93. Schwartz, W. S., and Moyer, R. E.: Chemotherapy of pulmonary tuberculosis with pyrazinamide used alone and in combination with streptomycin, para-aminosalicylic acid or isoniazid. Ibid., 1954, **70**, 413.

94. McDermott, W., Ormond, L., Muschenheim, C., Deuschle, K., McCune, R. M., and Tompsett, R.: Pyrazinamide-isoniazid in tuberculosis. Ibid., 1954, **69**, 319.

95. McCune, R. M., Jr., Tompsett, R., Muschenheim, C., Organick, A., Batten, J., and McDermott, W.: Pyrazinamide-isoniazid in animals and man, in U. S. Veterans Administration: Tr. 14th Conference on Chemotherapy of Tuberculosis, held February 7–10, 1955, in Atlanta, Ga., to be published.

96. Miller, F. L., Sands, J. H., Walker, R., Dye, W. E., and Tempel, C. W.: Combined daily terramycin and intermittent streptomycin in treatment of pulmonary tuberculosis. Am. Rev. Tuberc., 1952, **66**, 534.

97. Miller, F. L., Sands, J. H., Gregory, L. J., Hightower, J. A., Weiser, O. L., and Tempel, C. W.: Daily oxytetracycline (terramycin) and intermittent streptomycin in treatment of pulmonary tuberculosis. An investigation of administration of 2 grams of oxytetracycline daily. Ibid., 1954, **69**, 58.

98. Rothstein, E., and Johnson, M.: Streptomycin and oxytetracycline (terramycin) in treatment of pulmonary tuberculosis. Ibid., 1954, **69**, 58.

99. Storey, P. B.: Antimicrobial therapy of pulmonary tuberculosis, presented at 8th Annual Symposium on Pulmonary Disease, held September 26–30, 1955, at Fitzsimons Army Hospital in Denver, Colo.

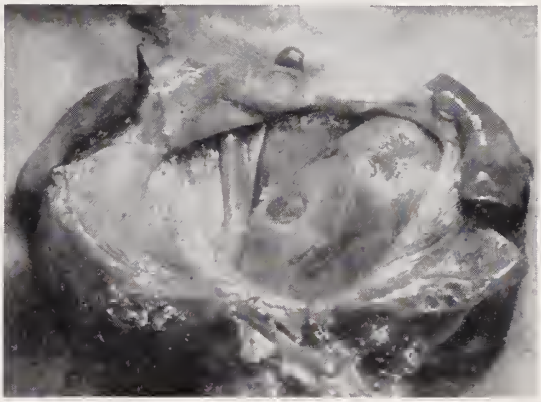


Fig. 12-C. Resected specimen showing smooth, hyaline-lined cavity representing so-called "cystogenic or bullogenic" open healing.

100. Epstein, I. G., Nair, K. G. S., and Boyd, L. J.: Cycloserine in treatment of human pulmonary tuberculosis; preliminary report, in U. S. Veterans Administration: Tr. 14th Conference on Chemotherapy of Tuberculosis, held February 7–10, 1955, in Atlanta, Ga., p. 326.

101. Katz, S.: True significance and real incidence of reactions following clinical use of antibiotics, presented in a panel discussion at the 3rd Annual Symposium on Antibiotics, sponsored by the Food and Drug Administration, Division of Antibiotics, November 4, 1955, in Washington, D. C.

102. Quarterly Progress Report of Veterans Administration–Army–Navy: Study on chemotherapy of tuberculosis. October, 1955.

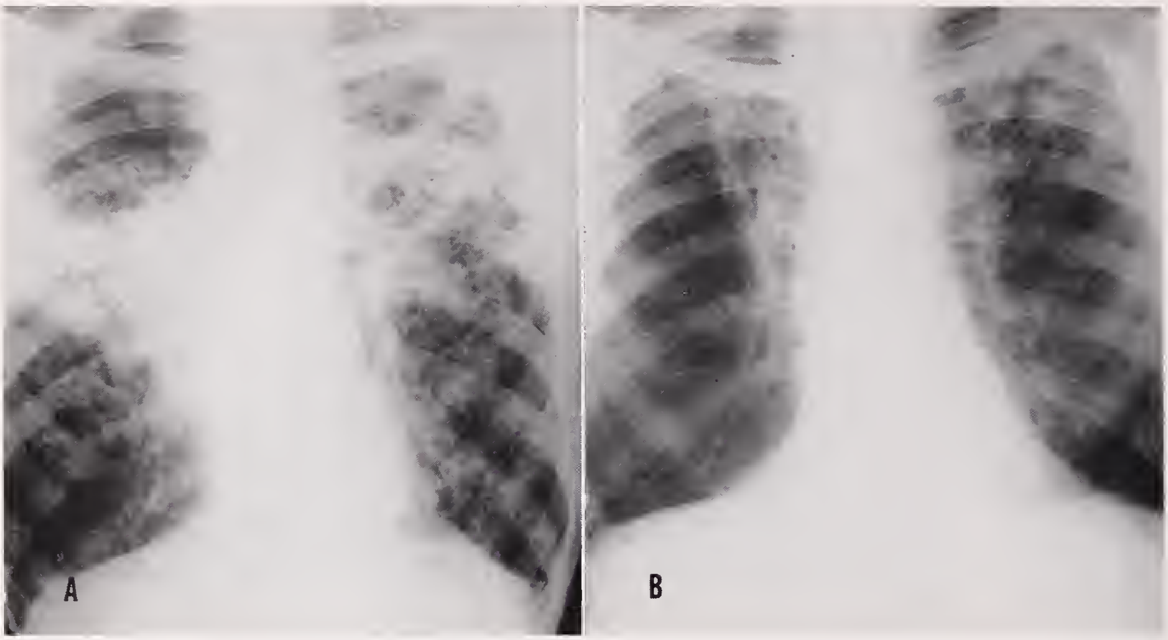


Fig. 13. (A) Bilateral chronic tuberculosis showing fibrocaseous exudative lesions as well as cavitation and multiple nodules. (B) Therapy with intermittent streptomycin and daily PAS has been indefinitely prolonged (4 years) resulting in maintained symptomatic and roentgenographic improvement as well as negative sputum. Therapy for life is contemplated.

103. Katz, S., McCormick, G., Storey, P. B., deLeon, A., Romansky, M. J., and Marshall, E. E.: Pilot study of Salizid, in U. S. Veterans Administration: Tr. 13th Conference on Chemotherapy of Tuberculosis, held February 8–11, 1954, in St. Louis, Mo., p. 374.

104. Statement of Committee on Therapy of the American Trudeau Society. Am. Rev. Tuberc., 1955, **72**, 408.

105. Medical Research Council, report to, by Tuberculosis Chemotherapy Trials Committee: Various combinations of isoniazid with streptomycin or PAS in treatment of pulmonary tuberculosis. Brit. M. J., 1955, **1**, 4911.

106. Dooneief, A. S., Hite, E., and Bloch, R. G.: Indefinitely prolonged chemotherapy for tuberculosis. Arch. Int. Med., 1955, **96**, 470.

107. Peabody, J. W., Sr., Katz, S., Davis, E., and Peabody, J. W., Jr.: Current concepts in management of pulmonary tuberculosis. J. Am. Geriatrics Soc., 1955, **3**, 566.

REVIEW OF THE SCIENTIFIC PUBLICATIONS FROM ST. ELIZABETHS HOSPITAL DURING THE PAST 100 YEARS*

NOLAN D. C. LEWIS, M.D.

Director of Research, New Jersey Department of Institutions and Agencies, Princeton

IN ATTEMPTING to deal with this interesting assignment, it has been necessary to consult as many of the old records as possible, the listed bibliographies of many former staff members, and particularly the annual reports, which fortunately have been preserved from the beginning of the institution.

Since too many events of scientific interest have occurred during this century of hospital activity to describe in detail, it has been necessary to condense radically and proceed to present first some facts of over-all general interest and then select rather arbitrarily some items for special comment.

According to my survey, which is probably fairly accurate, although perhaps not absolutely exact, there have been 1,480 publications appearing from the Hospital during the century. Thus the average has been about 15 publications per year. However, this would not be a fair indication of the output, since there were only 6 items appearing during the first 25 years, and only 97 during the second 25 years; therefore, 1,377 of the articles and books have appeared during the last 50 years. Things began to move in this respect in 1905 about three years after Dr. William A. White came into the picture. During the past 50 years the institution has averaged 27.5 items per year.

When the articles are divided into topics as accurately as feasible—since some could well be cross-indexed as combinations of clinical and pathologic reports, we find in numerical order articles on:

Descriptive clinical psychiatry	443
Therapy	216
Neuropathology	154
Forensic psychiatry	145
Psychology	130
Psychoanalysis	122
Administration	82
Chemical pathology	70
General pathology	44
Memorials	42
Books	32
TOTAL	1,480

The Hospital being created as a mental unit in 1855, naturally the first annual report appeared in 1856, and as far as I can ascertain from the early records there were no publications by the staff, other than some important exceptions which I shall mention later, until 1886, a period of over 30 years.

An interesting note, which I can hardly refrain from mentioning, appears in the year 1864 saying that Dr. Pliny Earle gave a course of 50 illustrated lectures and worked on the wards for a time just before he went to Massachusetts to become superintendent of the Mental Hospital at Northampton. Dr. Earle, as most psychiatrists know, was one of the original famous 13 hospital superintendents of the early days, whose career has been described by several of our medical historians.

---

* Delivered at the scientific program, May 6, 1955, celebrating the One Hundredth Anniversary of St. Elizabeths Hospital.

Another interesting note appears in 1883 when Dr. Godding, the second superintendent of the hospital, mentioned as a "new departure" that a full-time physician had been appointed to the National Hospital to perform the autopsies on mental cases. Although no place is mentioned as to the location of said hospital, one must presume that he meant the famous Queens Square Hospital in London which was organized under what was originally called the National Hospital. Anyway, there was no National Hospital in the United States that I can find. I believe this is of special significance, since a year later we find that I. W. Blackburn of Philadelphia, a pathologist trained by the noted Formad, was appointed Special Pathologist of St. Elizabeths Hospital. His appointment was announced in the October 1, 1884, report, and I believe it has been accepted that he was the first full-time pathologist in a hospital in the United States devoted to the study of mental disorders. The laboratory here bears his name.

In 1887 we find Blackburn getting under way with a report of postmortem examinations in 31 cases of paralytic dementia or general paralysis of the insane published as a supplement to the annual hospital report. This study, as were all subsequent ones, was richly illustrated by his pen drawings and personally supervised photographs. Many of you do not know of Blackburn's important early publications, although of course many in the audience have some impression of them, but I am certain that most of those present do not know that Blackburn was a trained, accomplished artist and not only graced his articles with his art but made many colored pictures of brains and painted various other motifs. This ability in medical art was very important, particularly in those days before the development of microphotography and color photography relieved us of so much tedious labor.

In 1889 we find in the annual report a comment that Dr. Blackburn had been "restored to health." This undoubtedly refers to an illness that was described to me verbally by one of his living associates when I first came to St. Elizabeths Hospital in 1919. It was said that Dr. Blackburn cut his hand while doing an autopsy on a patient who had died from streptococcal septicemia. He had contracted an active blood poisoning which was certainly most serious in the days before the antibiotics. He nearly lost his life, and his arm was barely saved from amputation. He was not quite but practically inactive until his death in 1912. During the years from 1887–1912 he published 25 articles. The second article on postmortem appearances of the kidneys in more than 250 cases of insanity came out the same year (1888) as the famous desk of Dorothy Dix was received, and his last or certainly very nearly the last accomplishment of this pioneer pathologist was the 1909 publication of a large, beautifully illustrated atlas, "Gross Morbid Anatomy of the Brain of the Insane." Here one finds 75 photographs that are unsurpassed in clarity and accuracy even to this day. Dr. Blackburn wrote extensively on both the neuropathologic and general pathologic findings in general paresis, in epilepsy and brain tumors which he covered in several articles, on internal pachymeningitis, on various atrophies, on vascular conditions including vascular anomalies and cerebral aneurysms, with both of these latter articles remaining very valuable and instructive to the present day. His paper on "Tuberculosis in 1,445 Postmortem Examinations in Mental Cases," written in 1900, is still quite a classic.

As far as publications are concerned, Dr. Blackburn was the only one of the staff with recorded publications until 1905, with the exception of an article by Dr. G. W. Foster in 1898. As assistant physician, he reported on results of hydrotherapy. I mention this particularly because this is one of the early papers devoted to this particular subject. In 1903 Dr. William A. White's first annual report appeared but bears no items referring to published work. However, in 1905, 2 years later, things began to pick up definitely in this line, since we find 2 statistical studies, 5 studies by Dr. White, 5 by Dr. Blackburn, 1 by Dr. Will Hough, who was then working on the laboratory, and 3 by Dr. H. J. Nichols, who was a member of the staff. From this date on through, St. Elizabeths has been outstanding in its published contributions. There are so many of them that I shall have to deal with a group of them in a different manner.

My search here and there has revealed that the early superintendents must have been inordinately modest, since they did not record their personal publications. Dr. Charles H. Nichols, who was superintendent, 1852–1877, wrote only 1 article as far as I can find. This was in 1878, when he gave an account of the mode of providing for the subjects of chronic mental illness. As the title suggests, it was an administrative paper.

Dr. W. W. Godding was superintendent, 1877–1899. During this period he wrote 27 articles including 1 book. Most of these were in the field of descriptive clinical psychiatry and treatment and were published in the old *American Journal of Insanity* and in the *Alienist and Neurologist*. In 1882 he wrote a book under the simple title of "Two Hard Cases," published by Houghton of Boston, comprising 257 pages. One article was published in 1882, "The Last Chapter in the Life of Guiteau." There seems to be an early spark in the field of forensic psychiatry that has commanded the interest and attention of several members of St. Elizabeths' staff, including the present superintendent.

Dr. A. B. Richardson, superintendent, 1899–1903, published 36 articles during his professional lifetime. I state it this way since most of these were published from 1886 to 1896 before he was director of the Hospital. Most of these were on various aspects of clinical psychiatry and were excellent papers in the light of the neurologic interpretations current at the time of the publications. I should mention that these early superintendents as well as the later ones, including our present Dr. Overholser, have also been extremely busy in organization and in building new buildings. New structures were erected during the administration and under the supervision of each one. There was obviously plenty to do in addition to studying psychiatry and writing papers.

Concerning Dr. J. M. Toner, it is possible that he was an acting superintendent for a few months. At any rate his name appears from time to time in the early reports. In 1867 he wrote a small book entitled "The Medical Register of the District of Columbia." This small volume of 102 pages lists all of the doctors in the District and some information regarding them. In 1877 he published a 112-page address, entitled "Some Observations on the Geological Age of the World," a talk that had been given before the Rocky Mountain Medical Association. This certainly indicates that Dr. Toner had interests outside of the strictly medical professional field. In 1876 he published a 140-page book dedicated to the famous surgeon, Professor Samuel D. Gross, entitled "Medical Men of the Revolution, A Brief History of the Medical Department of the Continental Army." This was an address given before the Alumni Association of Jefferson Medical College.

On January 1, 1907 Dr. Shepherd Ivory Franz was appointed Scientific Director. He had made some reputation as an experimental psychologist at the McLain Hospital near Boston, and under his stimulation the publication output went steadily upward. He was actively engaged in research into the early 1920's, when he moved to California, and many of his early publications here represent pioneering experiments on the frontal lobes of monkeys. These experiments are still quoted in the literature on brain physiology. He was also interested in the reëducation of the motor functions of brain-damaged patients, and I still remember vividly the baseball teams he organized with patients with various clinical types of paralysis.

In 1908 the Outlines of Psychiatry by Dr. White appeared for the first time. It was to become one of the most, if not the most popular and widely used text on the subject in the English language. It passed through 12 editions at least, the last appearing just before the beginning of the insulin therapy era.

In 1909 Nicholas Achucarro, an outstanding Spanish neuroanatomist, was added to the laboratory staff. He was a favorite pupil of Cajal and a teacher of del Rio Hortega. After studying in several European centers under famous investigators, he came to St. Elizabeths as histopathologist at the invitation of Dr. Blackburn. While here (during 1909 and 1910) he published 5 articles on neurohistology and neuropathology, all beautifully illustrated by his own pen. It is a great pity that his remarkable career was terminated by Hodgkins' disease at the early age of 37 years. (For detailed information on these excellent contributions, see the references at the end of the biographical sketch in Haymaker's "The Founders of Neurology," published by C. C. Thomas in 1953.)

In 1912 we find Dr. Bernard Glueck here publishing papers on traumatic and post-traumatic psychoses and also getting on in making a reputation in forensic psychiatry. By 1914 he had become particularly active in published contributions and in stimulating others to do likewise in this field. There were 10 publications in this field alone in 1914. Also in 1912 Gonzalo Lafora, the Spanish neuropathologist and neurologist, came to the laboratory to work. He has later occupied professorships of importance in Spain, South America and Mexico City.

In 1915 the appointment of Dr. Edward J. Kempf initiated an active interest in psychodynamics. He was certainly one of the first if not actually the first full-time clinical psychiatrist on the staff of a public mental hospital to devote full time to psychoanalytically oriented psychotherapy free from routine ward duties. His book on Psychopathology, comprising nearly 800 pages, which presented many new ideas, became so well known and desirable to all and sundry that even to this day it is wise to keep it under lock and key in libraries less it disappear without leaving a trace of its whereabouts. While here he wrote several original contributions and stimulated others to do so. Some of you older members will remember his keen analysis of the then popular play "Yellow Jacket," published in 1918.

In 1919 I came in from the Army as pathologist and with enough interest in psychiatry to indulge the urge to do psychoanalysis. I may be the only living person to have dissected cadavers by day and practiced psychotherapy by night, and in the intervening twilight to have hunted the *Felis domestica* (which the dictionary defines as the common cat) with Kempf, Hassall and their 2 eager canines.

I believe Kempf and I were the first two therapists anywhere to utilize the art productions of the mentally disordered therapeutically after the fashion of dream material. Many others in years previously had written on art and mental disease, but there is no evidence that they applied it in therapy. Subsequent workers in this field have merely elaborated the mechanisms that we pointed out in the original publications.

Dr. William A. White, as is well known, kept a rather steady stream of articles and books flowing from his ever-busy mind and pen. As far as books are concerned, following the appearance of the Outlines in 1908, the large 2 volumes, "Modern Treatment of Nervous and Mental Diseases," appeared in 1913 under the editorship of White and Jelliffe, and 3 years later the Jelliffe and White textbook of "Diseases of the Nervous System" (1916) was on the market to run through 9 editions.

To mention a few of Dr. White's subsequent books I would list the "Principles of Mental Hygiene" (1918), "The Foundations of Psychiatry" (1921), "Introduction to the Study of the Mind" (1924), "Essays in Psychopathology" (1926), "The Meaning of Disease" (1927), "Lectures in Psychopathology" (1929), "Medical Psychology" (1931), and later his interesting autobiography. I have not named all of his books but have indicated enough to show the wide sweep of his interests.

In 1921 Benjamin Karpman came to the staff with his special psychotherapeutic interests, and in 1922 Winifred Richmond brought her training and experience to bear on the issues of psychology. The period from 1920 to 1926 produced many publications on forms of therapy, on internal medicine and radiology under Watson Eldridge, and on neuropathology under Walter Freeman and Aramando Perraro and their assistants on into 1935. In 1924 the 2 first publications in the English language were made on the malaria treatment for paresis, and in the following year (1925) Dr. Richmond's book on adolescent girls came into being. In addition to many articles on the psychology of criminals Dr. Karpman published his book, "Case Studies on the Psychology of Crime," in 1944, the additional Volumes I and II in 1948, and his book on alcoholic women in 1949.

Many additional selections and comments could be made about the researches and productions of the yesteryears, but before leaving them for the more immediate period I must mention "A Textbook of Psychiatry," the first edition of which appeared in 1927 (Macmillan) as prepared by Dr. Arthur P. Noyes, then the first Assistant Physician to the Superintendent. Since everyone in our specialty knows what a success this book has been through the years, I need not describe it. Thus, in my opinion, which I am willing to defend if necessary, the 2 most valuable textbooks on psychiatry in the English language for the particular purposes of medical students have been through the years, even to the present, those of White and Noyes, and both were originally conceived and written in this institution.

About 18 years ago our present superintendent, Dr. Winfred Overholser, was appointed to head St. Elizabeths. During this period he himself has written numerous articles, the majority of which are probably on various legal relations of psychiatry. Recently (1953) his masterly book, entitled "The Psychiatrist and the Law," comprising his Isaac Ray Lectures, brings into focus the various issues that constitute the combined legal and psychiatric problems.

During Dr. Overholser's superintendency there have appeared 530 articles and books, which represent about 35 per cent of the output for the entire 100 years. Broken down into topics these represent:

Clinical psychiatry	162
Therapy (all forms)	108
Forensic psychiatry	78
Neuropathology	33
Chemical pathology	33
Memorials	30
Administration	29
Psychology	27
Psychoanalysis	18
General pathology	6
Books	6
TOTAL	530

It is thus obvious that such activity is encouraged here. I have prepared graphs of the publication output from year to year which indicate that the high points as well as the bulk of productions center around or reflect the special subfield of interest of the men appointed to the staff in key positions from time to time. This pattern is what should have been expected, since it represents a fundamental principle in search and research which always follows trends that are created by some enthusiastic person or persons.

May the good work go on and St. Elizabeths remain a leader in our needy specialty.

President's Page

PRESIDENT'S NIGHT

For a great many years the Society devoted one program annually to the Presidential Address. This was looked upon as an important occasion by members of the Society, who often attended with their wives.

The formal address was discontinued in 1940 when Dr. Daniel L. Borden, then President, decided to initiate a program of a considerably less serious nature. Considering the crisis through which the Society was then passing, the change could not have come at a more propitious time. The program consisted of musical numbers by an unusually talented and large group of physicians and their wives. Those who were present on that occasion will recall a very superior string quartet and a mixed chorus with soloists of unusual talent. Included were ceremonies in which an Honorary membership was conferred upon the Society's legal counsel, the late Mr. Charles S. Baker, and a talk by the President, in which he reviewed some of the medical history in the District.

At the beginning of World War II this type of program was also abandoned and not resumed until the administration of Dr. Herbert P. Ramsey in 1953. In his revival of President's Night, Dr. Ramsey also planned it along less serious lines except for a most interesting motion picture of Washington's medical past, to which he contributed a very informative and entertaining commentary. It was a highly successful and most pleasant evening.

Your President has decided to continue President's Night in the pattern of his immediate predecessor. However, there will be a few modifications because each President has some ideas about his Night. For example, this year all living Past Presidents will be presented with framed certificates in recognition of their services to the Society. A flag bearing the Society's seal, purchased by the Woman's Auxiliary, will also be presented to the Society by Mrs. Lawrence A. Rapee, President of the Auxiliary. The Auxiliary is also contemplating ceremonies of its own. There will be a short musical program by the Doctors Symphony orchestra, to be followed by a reception and refreshments in the Society's Library.

I am looking forward to welcoming many of you and your wives on President's Night, which is scheduled to be held in the Society's building on April 19.

W. Ross Morris

Editorials

DOES THE PHYSICIAN DO HIS PART IN CANCER CONTROL?

As physicians we are all in daily contact with cancer patients and the cancer problem. We repeatedly see the results of patient ignorance and fear-inspired delay. Too often, also, we see the unfortunate sequelae of faulty advice, incomplete diagnosis, or inadequate therapy. We appreciate the possibilities of cure under certain circumstances and know full well the inevitable course when malignancy is not controlled. Yet in the intimacy of our contact with carcinoma and perhaps due to the urgency of daily practice we are prone to be scornful of lay opinion, jealous of our own particular ideas of management, and perhaps fatalistic in our approach to the cancer problem in general. We may thus fail to grasp the size and scope of the cancer problem; fail to realize the interest and demands of the public in its solution; fail to capitalize on the many means of improving our own case management; and perhaps fail to see the rapid strides being made for more complete control.

The public as well as the individual cancer patient has a rightful stake in the attempts to eliminate this, the second greatest killer among man's afflictions, which takes annually over 240,000 persons in our own country alone. One of the greatest vehicles of public action in this field is the American Cancer Society, which raised last year over $24,000,000 for cancer control. In the Washington area alone in cooperation with the District of Columbia Division some 10,000 persons had a part in the activities of the Society, with the common purpose of helping voluntarily in what is truly a community problem. Twenty-five per cent of the funds collected go directly to research on a national scale, assisting not only physicians but chemists, biologists, physicists, etc., in their work. A great deal of the remainder is expended in direct service to cancer patients and in grants to support cancer clinics in local institutions. Community education in the District is being sponsored actively by the Society, which last year staged 610 educational programs reaching over 65,000 persons, with many films, such as those on breast self-examination and those teaching the common danger signals of cancer, stressing periodic examinations, and encouraging a hopeful and intelligent attitude about cancer.

What are you doing as an individual physician to further cancer control? Many of you contribute splendidly in the various cancer clinics and offer your services voluntarily to the many activities of the American Cancer Society. Most of you practice in such a way that your own offices are cancer detection centers in the best sense. However, we all know that improvement is possible, and I may add, mandatory, on the physician level. A high percentage of the delay in cancer treatment is physician delay. It may be due to unjustified reassurance of the patient. It may be incomplete examination which defers or discourages adequate detection. It may be a reluctance to request specialist consultation. It may be preoccupation with interest in one's own specialty. It may be fear of imposing further economic burdens on a patient. It may be the inadequacy of time which prevents postgraduate education and limits the full application of present scientific knowledge. Certainly the

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.

greatest contribution the physician can make is in the complete and adequate treatment of his patient in the light of modern knowledge. It is our obligation to see that such knowledge is disseminated on all levels.

Professional education is one of the major concerns of the American Cancer Society and is being actively promoted, at present reaching physicians, dentists and nurses as well as residents and students. The program for general practitioners, the carefully prepared monographs on cancer, the *Bulletin of Cancer Progress*, and the new kinescope program of educational films all merit closer attention by the physicians of the District. Constant reëducation through the national journals as well as local and national medical meetings is a part of every physician's activity. More formal postgraduate courses in cancer management, however, may well be anticipated in the future.

What further can be done to increase the effectiveness of physicians in cancer control? First, there is the need of greater awareness of the dangers involved; second, there is greater need for use of the facilities present in local hospitals and clinics for complete diagnosis; third, there is the need for more accurate and complete recording of carcinoma cases with a follow-up system which does not fail to indicate the completeness of treatment and its final results. This implies more than a Health Department record for statistical purposes. It means a review of treatment on a current basis with periodic reëvaluation of the patient's status, in view of present advances in medical knowledge. Perhaps more effective use of established tumor boards by all physicians seeing cancer patients would be helpful. The suggestion is further made that boards of tumor review may be advisable, as in the fetal and maternal mortality boards, which could without censure or publicity forcibly encourage the employment of effective and accepted therapy in the treatment of all cancer patients.

In the month ahead let us not only coöperate fully with the campaign of the American Cancer Society, but also resolve as physicians to reexamine our own practices and determine whether we are doing our part in cancer control.

HERBERT M. GIFFIN, M.D.
Chairman, Cancer Control Committee, The Medical Society of the District of Columbia

SCIENTIFIC CONTRIBUTIONS TO THE ANNALS

An analysis of the scientific papers which appeared in the ANNALS during 1955 was recently made by the Editorial Board. The data it furnished should be interesting and illuminating to the membership of the Society.

There were 57 articles in this section of the ANNALS, 3 of which should be classed as biographical and historical. One contributor was the author of 3 papers and one wrote 2. From the teaching staffs of the 3 Universities with medical schools, 11 papers were from George Washington, 15 from Georgetown, and 3 from Howard, the authors of which were chiefly assistant or associate professors. With the exception of 2, not a single contribution was submitted by the Chiefs of Medicine, Surgery or Obstetrics from the 3 Universities. The 2 were from Howard University. From the active staffs of Children's, Doctors, Garfield, and Providence Hospitals and the Yater Clinic, several scientific papers were accepted for publication.

To attempt to classify the papers by subjects would serve no purpose, but this observation is timely: three dealt with skin diseases; there were none on obstetrics, gastrointestinal surgery, and cardiovascular surgery, except hypothermia. No reference to the Salk vaccine was made in the scientific section of the journal. The number of papers submitted for publication was limited, and there was little opportunity for evaluation and selection. Those responsible for the contents of the publication sought diligently by oral contact and correspondence to obtain suitable material with mediocre success. The paucity of acceptable material is not explained by lack of competent authors, by indifference, or by pressure of professional duties, but what seems logical, the disinclination to have the product of their efforts restricted to a small number of readers—the subscribers of the ANNALS—with a circulation of less than 4,000.

This is understandable but does not validate the lack of coöperation of the members who are especially qualified to elevate the standard of our official publication. Those occupying the higher teaching positions are recognized teachers and should make valuable contributions, not only for their signal value, but also as an example to those in the lower brackets of the faculties and to the students as well. Ethical, wide distribution of their articles is possible through reprints at a nominal expense.

There are other sources of original material which have never been fully explored. The Department of Agriculture is congested with outstanding scientists whose work is closely related to medicine. As a single example, the present researches in sugar bid fair to open new avenues in nutrition and industry. The National Institutes of Health, The Bureau of Standards, and The Armed Forces Institute of Pathology are Federal organizations that are bulging with scientific material, which, if culled, would make articles any medical journal would be glad to accept. Our own city morgue is the repository for an enormous amount of pathologic specimens with intriguing histories and problems in forensic medicine.

At the 1955 meeting of the State Medical Journal Conference in Chicago, the Washington MEDICAL ANNALS was awarded second place, not for its contents, but for its make-up, or printers' art. No fault can be found with the physical aspect of the ANNALS, but the contents can be improved: "The fault, dear Brutus, is not in our stars, but in ourselves." There are members of our Society eminently qualified to translate their experience into scientific presentations if they wish to do so. The old typewriting exercise, "Now is the time for all good men to come to the aid of their party," should be taken to heart.

The medical market place is surfeited with wholesome produce, and we should appropriate it and leave the green fruit to ripen.

C. S. W.

ENZYMES AND THE PROSTATE

The enzymes in and related to the prostate are becoming more important as research data in this field accumulate. The most stimulating pioneer contribution in this field was that of Kutscher and Wolbergs,[1] who called attention to the presence of acid phosphatase in prostatic epithelial cells. After Kutscher and Wolbergs[1] and Gutman and Gutman[2] presented their observations, Huggins et al[3] called attention to the relationship of serum acid phosphatase levels in patients with and without metastatic prostatic carcinoma. The level of acid phosphatase in the blood is elevated in from 60 to 80 per cent of patients with this condition. The degree of elevation of serum levels usually indicates the clinical course; however, occasionally we see paradoxical serum levels. Huggins and his group also demonstrated that androgens increase the phosphatase level and estrogens decrease it. Fishman et al[4] have made quantitative estimations of phosphatase in normal, hyperplastic and carcinomatous prostate glands in which they have demonstrated that there is a higher concentration in the hyperplastic and carcinomatous ones. They have also contributed to the differentiation of prostatic phosphatase from other phosphatases. Herbert[5] carried out studies on alcohol-fastness of prostatic phosphatase and stated that whether the phosphatase was alcohol-fast or not determined whether or not it was from prostatic tissue. These observations have not been confirmed by others. Hudson[6] has studied the kinetics of phosphatase elaboration of prostatic cancer cells in relationship to cholinergic and thermal influences. Coplan et al[7] used Cline's technic in phosphatase estimations in conjunction with cytologic and clinical investigations.

---

[1] KUTSCHER, W., AND WOLBERGS, H.: Ztschr. f. physiol. Chem., 1935, **236**, 237.

[2] GUTMAN, A. B., AND GUTMAN, E. B.: Proc. Soc. Exper. Biol. & Med., 1938, **39**, 529.

[3] HUGGINS, C., SCOTT, W. W., AND HODGES, C. V.: J. Urol., 1941, **46**, 997.

West, Malcolm and Rusche[8] have studied the significance of renin and chymotrypsin as related to the clinical course of prostatic carcinoma and have used such estimations as a guide to therapy.

Baker[9] has contributed in the field of serum aldolase concentration and has concluded that, when aldolase is elevated in cases of prostatic carcinoma, this elevation returns to normal when therapy is effective. Sibley and Fleisher[10] at the Mayo Clinic made serum aldolase determinations in 880 patients who had a wide variety of diseases. They found an increase in serum aldolase in 23 per cent of 168 patients with malignant disease of various types. Warburg and Christian,[11] who did not think that elevated aldolase was a useful test of malignant disease in man, found that 20 per cent of 104 patients with malignant lesions had slight elevations.

There have been additional, innumerable contributions in the enzyme field to give testimony to its importance. In analyzing these contributions one realizes that the recognition of early metastatic carcinoma, in so far as phosphatase studies are concerned, falls far short of what we would like in view of the fact that it is only accurate in from 65 to 80 per cent. Coplan's work represents an effort to increase our percentage of reliability. Although he has had several false positives, it remains a philosophical question as to whether an occasional false positive due to the unusual sensitiveness of the phosphatase determination outweighs the benefit of additional cures or not.

It is of some interest at this time to realize that we are getting into a controversy over whether we should do total or subtotal prostatectomies because of the increasing evidence that cancer subsequently develops in as many as 6 per cent of the patients who have subtotal prostatectomies of one kind or another. Hudson's studies[6] in phosphatase kinetics seem to promise something in the future as to our ability to recognize the cases in which prostatic malignant tissue is present by the response to cholinergic and thermal factors.

Where renin and chymotrypsin stand as a practical modality we do not know. Aldolase studies with or without phosphatase studies may possibly increase our percentage of positive evidence in recognizing prostatic carcinoma.

In the cytochemical observations presented by Kelly[12] we have another modality in the prostatic enzyme field which eventually may or may not assist us in prognosis and may allow us to differentiate between the so-called "occult" and biologically active carcinoma.

---

[4] Fishman, W. H., and others: J. Clin. Invest., 1953, **32**, 1034.

[5] Herbert, F. K.: Quart. J. Med., 1946, **15**, 221.

[6] Hudson, P. B.: Clinical and laboratory studies on prostatic acid phosphatase, presented at the Mid-Atlantic Sectional Meeting of the American Urological Association in Washington, D. C., April 22–24, 1954.

[7] Coplan, M. M., Woods, F. M., Melvin, P. D., Gore and Ayre: Clinical, cytological and serological approach to early detection of cancer of prostate gland, presented at the Annual Meeting of the American Urological Association in New York City, May 31–June 3, 1954.

[8] West, P., Malcolm, D., and Rusche, C.: Laboratory controls in carcinoma of the prostate; estrogenic and androgenic effects, presented at the Annual Meeting of the American Urological Association in Chicago, Ill., May 21–24, 1951.

[9] Baker, R.: J. Urol., 1952, **69**, 426.

[10] Sibley, J. A., and Fleisher, G. A.: Proc. Staff Meet., Mayo Clin., 1954, **29**, 591.

[11] Warburg, O., and Christian, W.: Biochem. Ztschr., May 25, 1943.

[12] Kelly, R. A.: Study of human prostate by means of histochemical investigation, presented at the Annual Meeting of the American Urological Association in Atlantic City, N. J., June 23–26, 1952.

In the fertility field, Huggins, Scott and Heinen[13] analyzed the prostatic fluids and estimated the pH, water, sodium, potassium, calcium, total CO_2, chlorides, acid-soluble phosphorus, total nitrogen, nonprotein nitrogen, globulin, glucose, ascorbic acid, inorganic phosphorus, spermin phosphorus, urea, lactic acid and cholesterol. Without exploring the very complex metabolic chemistry concerning the prostatic secretion, I should like to point out that Huggins and Neal[14] contributed further on the proteolytic enzymes in the prostatic fluid and called attention to the presence of fibrinogenase and fibrinolysin and the difference in the semens of dog and man in this respect. In view of the fact that carbohydrate metabolism seems to be very important in the problem of fertility, the studies of Kelly[12] in which he has cytochemically demonstrated cellular distribution, the 1-2-glycols, the 5-nucleotidase and adenosinetriphosphatase provide the tools to throw additional light on research in this problem.

Lastly, in searching for ways to improve our ability to make more accurate prognoses, further investigation in this field of cytochemical staining may be important. The potentialities of the electron microscope in this field have been mentioned.

In conclusion, it may be said that phosphatase studies fall far short of providing a reliable modality in recognizing early cancer of the prostate with or without metastasis. Further technics, in so far as kinetics are concerned, seem to afford some hope of appreciably increasing our percentage of reliable assays. Aldolase, renin and chymotrypsin deserve further investigation. Contributions in cytochemical staining technics and electron microscopy may assist in problems of fertility and in improving prognostic accuracy in cases of prostatic carcinoma.

William P. Herbst, Jr., M.D.

---

[13] Huggins, C., Scott, W. W., and Heinen, J. H.: Am. J. Physiol., 1942, **136**, 467.

[14] Huggins, C., and Neal, W.: J. Exper. Med., 1942, **76**, 527.

THE DOCTORS AND THE NEW INSURANCE PROGRAM

In endorsing the Saint Paul-Mercury Indemnity Company professional liability insurance policy, the Medical Society of the District of Columbia gave primary consideration to the interests of its members. A change in the physician-insurance carrier relationship was urgently needed in the face of the increasing number of malpractice suits and mounting insurance premium rates.

Since the Society's acceptance of the program, previously complacent insurance interests suddenly started to flood the doctors' mailboxes with letters advancing reasons for continuing the old policies. This was to be expected, since the Saint Paul-Mercury Indemnity Company transacts its business only through their local, duly authorized agents, and in this area does not look with favor upon brokerage business. This is a business practice of the insurance company over which the Society has no control.

The new insurance program underwritten by the Saint Paul-Mercury Indemnity Company opens up a great potential for correcting the serious trend in malpractice litigation. The policy offered by the company contains no exceptions or exclusions under the professional liability section other than those involving claims arising from workmen's compensation or employers' liability coverage. On the other hand, the policies of most other carriers include the following exclusions: (a) to injury arising out of the performance of a criminal act or caused by a person while under the influence of intoxicants or narcotics; (b) to liability of others assumed by the insured under any contract or agreement, or to liability assumed by the insured under any agreement guaranteeing the result of any treatment; (c) to any use of X-ray apparatus for therapeutic treatment unless such use is specifically declared in the policy; (d) to liability of the insured as proprietor, superintendent or executive officer of any hospital, sanitarium, clinic with bed and board facilities, laboratory or business enterprise; (e) under Partnership Coverage, to such insurance as is or can be afforded under Individual Coverage to any member of the partnership described in the declaration.

In spite of the broader form of coverage provided by the Saint Paul-Mercury Indemnity Company policy, the rates in most cases will be no more than the rates currently in effect by other companies. Of equal importance to the policyholder is the Committee's arrangement with the insurance company regarding negotiations subject to Insurance Department approval for future premium reductions or increases and a special procedure agreed upon for the handling of claims.

Some unnecessary significance has been given to a feature in other policies wherein the written consent of the doctor is required in the settlement of any claim. One local broker's letter, in dollar-tinkling phraseology, attempted to tell doctors that they were being deprived of their final right of consent to settle or not to settle any claim made against them. Under the new program arranged by your Society, its Insurance Committee and the Company's specially-trained legal personnel will complement each other to help the physician or surgeon receive the treatment he expects. This procedure has been found to be sound in many successful insurance programs throughout the United States. (I do not know nor recall a single instance where it has been a point of issue.)

When the time comes for the doctor to convert his professional liability policy, the above comparison should be kept in mind, as it speaks for itself. While the new Saint Paul policy provides the broadest and best protection for the physician or surgeon, of greater importance to every doctor is the complete understanding existing between the Medical Society of the District of Columbia and the Saint Paul-Mercury Indemnity Company, that through their combined efforts it is hoped the number of malpractice suits in the District of Columbia will be reduced.

Alfred A. J. Den, M. D.
Chairman, Committee on Professional Liability Insurance, The Medical Society of the District of Columbia

In and Out of Focus

BY THE OBSERVER

P.S. Ambulance Sirens

In the last issue of the Medical Annals your Observer reported the results of a survey of the Medical Society's membership to ascertain its views on the indiscriminate use of ambulance sirens. Members will recall that the questionnaire sent them was subject to considerable criticism; that the majority of those who responded were of the opinion that sirens were essential but that ambulances should be required to adhere to traffic regulations.

As was to be expected, the fact that the survey was being made was news and therefore reported in the press. Letters to the editor soon appeared charging bias in the preparation of the questionnaire. However, these were soon forgotten. As this is written, the February issue of the ANNALS has not made its appearance and the figures alluded to in the opening paragraph have not been made public.

When they are, the results of another investigation not known to the Traffic Committee at the time its report was prepared will make an interesting postscript. In an article appearing in *The New York Times* for January 29, 1956, it was reported that Chicago had banned sirens on police cars to reduce the number of accidents. Events which preceded and followed this action were contained in a report submitted to the Traffic Institute of Northwestern University by Timothy O'Connor, Commissioner of Police.

Overdependence of police drivers on sirens as sufficient warning to clear the way was one of the leading causes of accidents, the report stated. As a result, warnings were issued to drivers to use greater caution, particularly on emergency runs. However, the accident rate continued at the same level. Sirens were then disconnected and bright red lights were used in their place to indicate emergency cars. This, the report continued, placed the question of a safe speed directly up to the drivers. There could be no mere reliance upon sound to insure a clear path at intersections.

Following the elimination of sirens, Mr. O'Connor said, there was a 62 per cent reduction in police emergency car accidents between January 1, 1955 and June 30, 1955.

New York City did not fare so well when fire and police department sirens were silenced on September 11, 1950. The departments complained that they were frequently delayed when responding to calls because of a lack of coöperation by pedestrian and civilian vehicles. Sirens were restored to use in January 1953.

What pertinency has the Chicago experience to the District's ambulance situation? It will be argued that police cars and ambulances are on quite different errands. Pro-siren adherents will insist that ambulances on emergency calls are engaged in the saving of human life, that often minutes count. They will also point to the accident-free record of ambulances in the District and to the evidence supporting the contention that avoidable delay might cost lives.

Those who disagree will insist that such an experiment as that being conducted in Chicago, if successful, is worth trial here; that the wailing of sirens is not only unnecessary but disturbs the patients who are being conveyed to hospitals; and that only in a very few instances would the welfare of patients be jeopardized if sirens were eliminated and ambulances required to conform to traffic regulations.

Whether one is pro or con in this matter, the Chicago experience deserves further investigation to ascertain its real value and its applicability to the operation of the District's ambulances.

★

On Endorsing Applications

Many physicians, it appears, consider the endorsement of applications for membership in the Society pretty much a routine matter. After all, they reason, the applicant is licensed to practice so he can't be too bad. If he doesn't quite measure up, there are others no better and perhaps worse who already belong to the Society.

It doesn't happen frequently, but every so often an endorser is questioned as to what he knows about the applicant. Frequently his response is that he knows very little about him; he endorsed the application only because he was asked to. This has happened frequently enough so it would seem that something should be said on the subject.

Whether or not the physician realizes it, his endorsement is taken seriously by officials of the Society who must judge the applicants' qualifications for membership. They take it for granted that he is known to each endorser as being "a reputable, legally qualified practitioner of medicine," and that in other respects, too, he would be a desirable member.

Of course, it is not always easy to ascertain the facts about an applicant's background. At times the physician feels himself obligated to accept the views of a respected colleague about a prospective member. Usually this is sufficient. At times, however, further investigation is indicated before the endorser affixes his name to the application.

The question may arise, what is the Society itself doing to screen physicians? Here is the step-by-step procedure followed in processing applications:

On receipt of an application for membership at the Society's Executive Offices, it is carefully checked to see that all questions asked have been answered and that endorsers are Active or Life (voting) members in good standing.

If the applicant has had previous affiliations with medical organizations, especially state and county medical societies, letters are directed to these organizations, inquiring about the individual's professional standing and his reputation in general. This is made a part of the record to be reviewed later by the Board of Censors.

The applicant's name, the medical school from which he graduated, the year of his graduation, and the names of his endorsers are then made a part of a list which is sent to all Society members.

Following the mailing of this list, the Society's Constitution and By-laws provides that two months must elapse. This affords an opportunity for objectors, if any, to be heard. Sometime during the latter part of the two-month period, the applicant is interviewed by the Board of Censors. Facts stated in his application are read to the Board. If he has served in the Armed Forces of the United States, he is asked for a photostat of his separation papers.

The Board must then decide whether it wishes to recommend his election to the Executive Board, which it usually does. The Executive Board seldom questions the Board of Censors' recommendations.

If the applicant is elected he becomes a member for a probationary period of one year, at the end of which time his election is confirmed or rejected by the Society itself.

There can be no question that the final responsibility for the quality of the Society's membership rests with those elected to investigate and pass on an applicant's desirability as a member. On the other hand, this does not relieve the endorser of his obligation to vouch only for those he knows personally or who, he is satisfied, will meet the requirements for membership.

★

Do Doctors Read Their Mail?

It has long been an accepted fact in medical circles that doctors consign a substantial portion of their mail unread to the "round file." Most often "filed," it is said, are communications which he receives from his medical organizations. In this he is abetted by his office staff, who are willing collaborators.

A few weeks ago a member of the Medical Society called your Observer to discuss a subject of special interest to every physician in the community. He bemoaned the fact that his colleagues were so uninformed, but he said resignedly, "You know better than anyone else that members of the Society never read the communications sent them." "Sorry to disagree," your Observer responded, "but that has not been my experience." In support of this statement your Observer gave the physician some facts which surprised him as it may others who believe as he does.

On December 31, 1955, the Society had 2,035 members, of which 1,490 were Active or Life (voting) members. Only a comparatively small number of the latter attend business sessions of the Society. In an effort to obtain more representative opinion or even a vote on a vital issue the mail ballot is frequently used. A 15 to 20 per cent response in these circumstances is usually considered very good.

What has been the Society's experience?

Below is the response to canvasses since the first of the year.

SUBJECT	*Total Ballots Mailed*	*Number Returned*	*Percentage*
Nominating Committee	1,480	812	55
Ambulance Sirens	1,437	518	36
Fees of General Practitioners, Internists and Pediatricians	657	394	59.8

While the above should convincingly refute the belief generally held that the Society's mail is not read, it must nevertheless be admitted there is evidence that recipients are selective in their reading and frequently not too thorough. This is disturbing when it involves communications dealing with crucial matters which deserve the most earnest attention of all members.

At the moment, there are important decisions to be made with respect to voluntary health insurance plans. These decisions should not be based on emotion or prejudice but on fact. Doctors have had at least 10 or more years to inform themselves about the issues involved. How well have they done it? No one really knows, although the impression is that many are distressingly uninformed.

The most encouraging thing about all this is that in the District of Columbia physicians do read their mail and perhaps, too, they are better informed than in most places in regard to problems facing medicine.

★

Doctor's Children A substantial majority of physicians in the country favor their sons' entering the medical profession. At least this was the view expressed by most physicians who answered questions put to them in a Nation-wide survey conducted by *Medicine in the News* (Schering Corporation, December, 1955).

To be specific, the *News* reported that 60 per cent of the physicians who responded (the exact number was not given) would advise their sons to become physicians. They gave as their principal reasons: the satisfaction in helping humanity, doing something worthwhile, financial security, and social prestige.

Physicians who took the contrary view expressed the opinion that sons should decide for themselves what vocation they wish to enter. Medicine, they believed, should not be their choice unless they strongly desire to undertake years of arduous study. Other views voiced by the minority were that the physician had too little time with his family; that financial rewards were inadequate; that trends toward socialized medicine would inevitably lead to an objectionable type of practice; and most doctors were overworked.

Only 15 per cent of physicians wanted their daughters to become doctors. Those favoring this view again expressed the opinion that there was great satisfaction in helping humanity and that theirs had been a mentally rewarding occupation. Opponents of this idea thought that a woman's place was in the home. Women, some stated, were not physically and emotionally suited to medicine. Others said medicine is too strenuous a vocation for women. It need hardly be said that women physicians will take strong exception to this point of view.

There was really no surprise in the results of the survey with respect to sons of physicians. It confirmed the belief long held by your Observer that the majority of doctors are highly pleased when their sons follow in their footsteps. There are a number of father-and-son associations in Washington. In one instance, there are two sons associated with their father—all of them engaged in the same specialty.

As for the doctors' views with respect to daughters, that perhaps should have been expected. However, the comparatively small percentage who favored medicine as a career for the feminine members of the family was lower than your Observer, for one, anticipated.

T. W.

THE PROS AND CONS OF THE TISSUE COMMITTEE*

INTRODUCTION

ALFRED A. J. DEN, M.D.

Chairman, Professional Liability Insurance Committee, The Medical Society of the District of Columbia

As is well known, the responsibility for establishing and maintaining professional standards in the hospital lies with the medical staff. This obligation is discharged through mandatory committees. At present five committees are required for accreditation by the Joint Commission on Accreditation of Hospitals.[1] One of these, the Tissue Committee, is charged with the obligation of evaluating the need for surgery performed by members of the medical staff.

Integration of the Tissue Committee within the organizational structure of the medical staff was originally recommended by the American College of Surgeons.[2] This recommendation was made after a careful study of surgical experiences in various sections of the United States disclosed a number of cases of unnecessary surgery. In the forefront of these disclosures were unjustified appendectomies and surgical procedures in the field of gynecology. Through the constant vigilance of an effective Tissue Committee, it is anticipated that such surgery can be eliminated.

In the light of this development it seems logical to speculate on the desirability of a committee or committees to evaluate all medical care in the hospital. If such a proposal should receive serious consideration, the following questions can be anticipated:

"Is the trend toward establishing judicial bodies whose function is to pass judgment on the need for surgical and medical procedures sound?" and, "Is it in the best interest of patients and physicians?"

If the answer to the first question is in the affirmative, what group should have supreme authority, a committee or the medical staff itself?

What assistance, if any, should be given a transgressor to help assure his survival professionally after an adverse decision?

These questions and many others would require answers. They would serve to emphasize the seriousness of passing judgment upon a physician's professional capabilities, judgment and integrity and to stress that steps in this direction should be taken only after deep reflection and thoughtful discussion.

As physicians strive to correct defects in the conduct of medical practice within the hospital it will become necessary to adopt more or less rigid rules. In the process their fellow practitioners may be placed in a sensitive legal position, because any error in judgment or performance may result in litigation.

With these and other factors in mind the authors whose opinions are presented here have attempted to highlight the problems which confront the Tissue Committee. As has been indicated, the fields with which the Tissue Committee is chiefly concerned are gynecology, general surgery, pathology and law.

---

* The papers constituting this article were presented by Drs. Alfred A. J. Den, J. Keith Cromer, O. Hugh Fulcher, Theodore Winship, and Mr. H. Mason Welch at a symposium on this subject sponsored by The Medical Society of the District of Columbia at the Hotel Statler in Washington, D. C., October 12, 1955.

[1] Standards of Hospital Accreditation. Chicago, Ill.: Joint Commission on Accreditation of Hospitals, 1953.

[2] Manual of Hospital Accreditation. Bull. Am. Coll. Surgeons, 1951, **36**, 338.

THE POINT OF VIEW OF THE OBSTETRICIAN AND GYNECOLOGIST

J. KEITH CROMER, M.D.

Chief of Gynecology, Doctors Hospital, Washington

Following the publication of an article entitled "Hysterectomy—Therapeutic Necessity or Surgical Racket," written by Dr. Norman F. Miller[1] and published in *The American Journal of Obstetrics and Gynecology*, June 1946, numerous articles appeared in certain lay journals adversely criticizing small

---

[1] Miller, N. F.: Hysterectomy—therapeutic necessity or surgical racket? Am. J. Obst. & Gynec., 1946, **51**, 804.

segments of the medical profession. Although the merits of Dr. Miller's article are recognized, the manner of presentation and highly critical nature combined in print to cast a shadow of doubt on the integrity of the medical profession as a whole.

One result of the publication of these articles, however, was to arouse the profession to its own danger and to stimulate it to raise its own guard. Its efforts were soon rewarded when the Surgical Control Committee, as outlined by the American College of Surgeons, came into being. This is the committee which most often is referred to as the Tissue Committee. It has two basic objectives: (1) the preservation of the integrity of the medical profession, and (2) protection of patients against needless surgical procedures.

The field of gynecologic surgery has always been vulnerable to exploitation by surgeons of little skill, mediocre ability, and questionable reputation. There are many reasons why this specialty invites the adventurers in surgery. The chief ones are (1) that many women are gullible and can be sold a bill of goods by a "salesman-type" of surgeon, and (2) that gynecology as compared to other branches of surgery is a lucrative field, with little risk for the patient. But, while it may as a specialty be a bonanza for the charlatan and the unscrupulous surgeon, it is also subject to careful scrutiny by all of the watchdogs of medicine since it deals with surgery of the reproductive organs.

In the field of gynecology the Tissue Committee pays particular attention to and scrutinizes carefully all hospital records which fall into the following three categories: (1) cases in which the pathologist reports minimal or no pathologic changes, (2) cases in which there is marked disparity between the preoperative and postoperative diagnosis, and (3) certain cases in which tissue was not removed, such as uterine suspensions, lysis of adhesions, and exploratory laparotomies without consummation of surgery.

Records from these three categories are selected for further evaluation when the Tissue Committee, after careful study, is unable to justify the procedure in the light of available clinical data, physical findings and tissue reports. For example, justification for a hysterectomy on a 35-year-old patient for menorrhagia in the absence of pelvic findings and without a preliminary diagnostic curettage is not forthcoming. The appraisal is still more difficult when the surgical specimen reveals only an endometrial polyp. In situations of this sort the Tissue Committee may consider it necessary to request additional information from the attending physician before completing its evaluation of the record. By this method the Tissue Committee is able to demonstrate or reconcile any disagreement between the clinical findings and the pathologist's report.

At stipulated intervals the Tissue Committee reports to the general staff of the hospital the number of cases in each of the three categories which were adversely criticized by the committee during that time. Beyond this point the Tissue Committee lacks jurisdiction and its function ends. It is strictly a fact-finding body. It lacks the right of censorship or the power of disciplinary action. While the Tissue Committee is an excellent means of curtailing surgery, it also carries the seeds of its own destruction. In the well-organized teaching institution, affiliated with a medical school, there is little reason for the existence of a Tissue Committee. The censorship imposed by the medical students, residents, interns, and department heads is sufficient in itself to deter unwarranted procedures. In the voluntary, unaffiliated private hospitals the need for a well-functioning Surgical Control Committee is paramount. It is the best possible method of elevating surgical standards. In this type of hospital, if the chief surgeon is unscrupulous and the pathologist is in connivance with him, the Tissue Committee will function in name only. Normal tissues will be removed; unnecessary operations will be performed; and ghost surgery will flourish.

To some the use of a Tissue Committee to improve surgical standards is a restriction and a form of regimentation imposed upon many conscientious physicians because of the unethical practices of a few. Those who subscribe to this idea believe that the best place to elevate surgical standards is in the medical school through proper indoctrination of the medical student. Although I concur in this belief, I believe also that, human nature being what it is, constant watchfulness is essential to maintain these standards.

A wise Chinese philosopher once taught that "the direction in which you are headed through life is unimportant; it is what you do along the way that counts." This fundamental idea, in addition to being a good working rule for all conscientious surgeons, is the keystone in the arch of all worthwhile medical goals. It should not be important that you become a specialist, or acquire great wealth or fame. It is what you do along the way, or "to your patients," that should count. The implications inherent in this statement are significant. Not only must the procedure performed on the patient be justified, but accurate records attesting to this fact must be kept.

In most Tissue Committee audits much ado is made about the removal of normal organs or normal tissues but little is said about the case in which inadequate surgery is performed and too little tissue is removed. For example, the removal of uterine fibroids by amputating the uterus through a cervix harboring cancer is hardly justified by present-day standards. Although the procedure may be carefully performed and may be justified in the treatment of uterine myomas, it certainly will not be appreciated by the family of the patient who subsequently dies from disseminated cancer arising from the cervical stump. This is one of the inherent difficulties involved in Tissue Committee audits which seldom see the light of day in hospital staff conferences.

The difficulty most often encountered by Tissue Committees in appraising records is the lack of adequate clinical data. While this deficiency may be a result of a language difficulty on the part of the recording intern, who is now often from a foreign country, it represents a problem that must be met and dealt with by the attending physician. A brief statement by the attending physician giving the clinical facts, physical findings, diagnostic impression, and proposed operative procedure is frequently all that is needed to clear the record. In a lawsuit-conscious world this is important.

Although the primary purpose of the Tissue Committee from the viewpoint of the gynecologist is the preservation of the integrity of the profession, it has the additional responsibility, when viewed from the patients' angle, of protecting them against unnecessary surgical procedures.

In this modern world the public is being led to believe that there is no such thing as a calculated risk—accidents cannot happen—someone is always responsible. This attitude is the underlying reason for many of the lawsuits pending against physicians today. The best possible countermove against this trend is the elevation of surgical standards by the elimination of unnecessary surgical procedures. This can be accomplished through the medium of a well-functioning Tissue Committee.

In short, the Tissue Committee is the surgeon's strongest ally, the patients' best friend, and the profession's bulwark of strength. Let physicians hark to their own needs and preserve it.

THE POINT OF VIEW OF THE SURGEON

O. HUGH FULCHER, M.D.

Chief of Neurosurgery, Georgetown University School of Medicine

The surgeon is dedicated to the welfare of the patient and welcomes the coöperation of any committee that will abet him in executing this ideal. The Tissue Committee has the same purpose and therefore qualifies as an ally.

The attentiveness to duty by the American surgeon and his allies has won leadership in this specialty. Perhaps in no other country does the individual patient receive such careful diagnostic consideration, such meticulous preparation for operation, and such comprehensive postoperative supervision as he does in North American countries. Among other things the total care of the patient requires that pertinent data not only be acquired, but also be recorded. These recorded data represent the chief source of facts for the Tissue Committee, though the members can usually contact the surgeon if this seems warranted. It is true that the patient may not suffer any immediate neglect if there is a poor record, since the particular surgeon may have retained all important data in his memory. However, this type of record will be of no value for teaching purposes, for clinical research, for Credential Committee inspection, or for accurate information regarding the patient which may be required in the future. These are important considerations for the total welfare of the patient, which can be improved only by continued advances in the science and technic of surgery. Even the most conscientious surgeon will be a little more careful in recording his data if he knows that a committee of his colleagues will evaluate them. It is the difference between the care of one's personal appearance when alone and when expecting guests. Furthermore, it is just as expensive for the hospital to keep poor records as good records on file.

The members of the Tissue Committee must possess medical statesmanship. Without this quality the results of their efforts could be harmful.

I shall discuss the main body of the subject under six heads:

1. The correct preoperative diagnosis, as proved by surgical exploration and the pathologist's reports on the tissue removed, does not necessarily make the records acceptable. Other data recorded could be inaccurate or inadequate. The case history could show that the patient had complications which demanded priority of treatment. If the patient had a brain tumor and gallstones it would be improper ordinarily for the surgeon to perform a cholecystectomy until after the brain tumor had been successfully treated.

2. The example of a case history with no tissue removed does not necessarily indicate that the operation has been useless. Many surgical procedures have physiologic indications, such as mitral stenosis, a ruptured viscus, and severed nerves or tendons. The data recorded in the case history, however, should be explicit.

3. Normal findings at operation do not necessarily indicate useless surgery. When a subdural hematoma or an epidural hemorrhage is suspected, the patient should be operated on. At the present time there exists no method of accurate preoperative diagnosis of such conditions. The suspected condition is so serious and the operative risk for the condition is so negligible, that it is far preferable to operate on 10 patients suspected of suffering with subdural hematoma or epidural hemorrhage and find that no such condition exists than to let a single patient die of one of these conditions without having the benefit of surgical exploration. The same thing applies to those patients suspected of suffering from a ruptured viscus.

4. The removal of normal tissues does not prove that the operation was needless; it merely indicates that the tissue did not have to be removed. If a patient presents the symptoms and signs of appendicitis, the responsibility of the conscientious surgeon regarding the safety of his patient may be so great that he must frequently elect to perform a safe surgical procedure rather than risk the hazards of the appendix left in situ. At any rate, I doubt that the removal of a normal appendix is ever a useless procedure. I had mine removed as a therapeutic precaution.

Recently there has appeared both in medical and lay publications much irresponsible writing about the greedy surgeon who operates solely for financial gain. Frequently it is necessary to perform appendectomies at charitable or municipal general hospitals at night. In this instance the surgeon must arouse the operating room staff and the anesthetist and spend time ordinarily dedicated to sleep. Sometimes the appendix removed will prove to be normal. Surely no one could accuse the surgeon of operating in greed. This situation merely demonstrates that there exists no infallible method of making a sure preoperative diagnosis and that the surgeon is so conscientious over the responsibility of the welfare of the patient that he simply must do the safest thing from a percentage standpoint. How often has a surgeon wished that he could live yesterday again to administer to a patient? It is sometimes right to be wrong, rather than to be too timid to ever take the risk of an error.

At times the removal of normal tissue is the purpose of the surgery, such as in the excision of sympathetic nerves to produce vasodilatation or to eliminate causalgia.

5. An operation is frequently performed for diagnostic purposes. In this instance the tissue removed for biopsy may not disclose any pathologic change.

6. Occasionally there will be a surgeon who has become emotionally unstable, has been unable to use good judgment during a period of great responsibility, or has become ill. In this instance the work of the Tissue Committee, extending over a period of time and including many case histories, will be a great contribution. This fact-finding committee will soon show evidence that such a surgeon may even deserve the loss of surgical privileges.

In conclusion, it is my opinion that the medical statesmen who have constituted the Tissue Committees at various hospitals have made a great contribution to surgical therapy by making facts available to the chief of staff and hospital administrator. This, however, is no age for the timid surgeon. He must perform his duty at a level far above requirements, and he is quite likely to experience sociologic and legal vicissitudes. This is one of the modern hazards of his profession. He must choose that type of surgical therapy which he thinks best for a particular patient. There may be several acceptable methods of treatment, but he can use only one. He must perform his duty at the very highest level with fortitude superimposed upon dignity evolved through the sustained efforts and proud heritage of members of a noble profession.

THE POINT OF VIEW OF THE PATHOLOGIST

THEODORE WINSHIP, M.D.

Senior Pathologist, Garfield Memorial Hospital, Washington

Soon after the announcement of the new requirements of the Joint Commission on Accreditation of Hospitals, publications on Tissue Committees began to appear.[1, 2, 3] The study of these articles showed wide variation in the interpretation of the principles. Certain small hospitals evaluated all cases in which a surgical procedure had been performed; others spot-checked every fifth or tenth chart; some judged only the cases which concerned gynecologic surgery or appendectomies. It is generally agreed that most of the "unjustified" surgery occurs in these fields. Two years' experience on a Tissue Committee has proved to me that a really thorough job can be done only in a small hospital in which all the surgical cases can be evaluated in a few hours. Acceptance of membership on the Tissue Committee immediately imposes a serious duty concerning the welfare of the patients, the staff, and the hospital. The position of freely criticizing the records of professional care of patients in an open staff hospital is not an enviable one. My experience shows clearly that no surgeon should ever be criticized because of the Tissue Committee's low rating on a specific case. The data contained in a hospital chart which are studied in retrospect can never accurately reflect the surgeon's clinical evaluation or judgment of the patient during the illness. The only value of the Tissue Committee's statistics is to show comparative trends. If, in a large percentage of cases, one surgeon shows consistently low ratings, that fact becomes important. I believe that any action taken in such a case should be taken by the attending staff of the service involved and not by the Tissue Committee. It has been stated that the success of the Tissue Committee depends on forthright pathologists and sincere, judicious, and coöperative clinicians. These essential characteristics seem to vary somewhat. This fact became apparent in the discussions on Tissue Committees during a pathologists' meeting about a year ago. In some hospitals 98 to 100 per cent of the appendices removed are called acute, and it is said that normal uteri are never removed. In other hospitals tissue is examined only by frozen section. Obviously, an evaluation based on such data as these is not valid.

I do not mean to imply that a procedure should be judged entirely upon the pathologic findings. I am sure that all pathologists would agree that removal of normal tissues may be perfectly justified in some instances. There are several ways in which the pathologist can facilitate the work of the Tissue Committee. The gross examination of the specimen is of the utmost importance in rendering an exact, final pathologic diagnosis. The evaluation of the Tissue Committee is often dependent upon this description, because it is sometimes quite different from that given by the surgeon. Structures described by the "fruit-and-nut" doctors as of "hazelnut" or "grapefruit" size, or the size of a "three-month pregnancy," are measured accurately in the laboratory. It is hoped that this statement does not discourage the description of the operative findings, because they are far more important than a detailed description of the sutures used or the type of forceps

---

[1] Myers, R. S.: Tissue committee gets down to essentials. Mod. Hosp., 1953, **81**, 56.

[2] Tipton, W. T.: Tissue audit committee in open staff hospital. Bull. Am. Coll. Surgeons, 1954, **39**, 159.

[3] Myers, R. S., and Stephensen, G. W.: Evaluation form for tissue committees. J.A.M.A., 1954, **156**, 1577.

employed to grasp an appendix. Only a trained physician can make an adequate gross examination, and this is impossible in many cases without proper orientation. Frequently tissues are sent to the pathology laboratory without adequate clinical data. Such specimens account for many of the cases downgraded by the Tissue Committee.

Other methods may be used to improve the accuracy of the records. For instance, rather than embedding small sections of an appendix, the entire organ can be embedded. This procedure allows examination of the entire appendix and the finding of small inflammatory foci which ordinarily would be missed. Gallbladders and intestines can also be rolled for sectioning. A record of the accurate measurement and exact position of fibromyomas in the uterus or cysts of the ovary has often aided the Tissue Committee in evaluating a case.

Pathologists will agree that a well-functioning Tissue Committee is excellent insurance against poor medicine and unnecessary surgery.

THE POINT OF VIEW OF THE ATTORNEY

H. MASON WELCH, LL.B.
Counselor-at-law, District of Columbia

It is not my province either to extol or deplore the functions of the Tissue Committee. I assume, at this stage, that the Tissue Committee is an established hospital committee; and I assume that we must, from a legal viewpoint, accept it as a definite, functioning part of the medical institution. So my viewpoint is, "What impact does the Tissue Committee have upon the legal problems which from time to time confront the members of the profession in the nature of malpractice claims or malpractice litigation?"

Inasmuch as a Tissue Committee is established and does function, it is immaterial from a lawyer's standpoint whether some surgeons approve or disapprove of it, or whether some think that the conclusions and determinations of the Tissue Committee are justified or not justified. The simple fact is that the Tissue Committee is primarily a fact-finding body, as described by Dr. Den in his introduction. He stated that a "careful study of surgical experiences in various sections of the United States" had "disclosed a number of cases of unnecessary surgery." It is beside the point whether there are many or few who can be brought within the category of members of the profession doing unjustified surgery. As a lawyer I am not interested in the over-all picture; my problem comes when a specific surgeon, or physician, or both, and perhaps the hospital also, is charged with negligence and malpractice in a specific instance. In such a case, how the Tissue Committee functions becomes very important to you as individuals.

Let us begin by assuming that the Tissue Committee is an organized and approved step forward—to maintain high standards of surgery and, as expressed by some writers, to "police" the surgery done in various institutions. That is definitely a laudable purpose. It would be impractical and immoral, from a legal standpoint, to suggest that, because it may be dangerous in some specific instances, it be abolished, or that its functions be cloaked in secrecy. The danger that we confront from the legal viewpoint in specific cases is that the functions of the Tissue Committee cannot be cloaked in sufficient secrecy to avoid the pitfalls and the dangers which I have in mind, and which I think I should mention.

I am certainly not presumptuous enough to think that I can or should tell the Tissue Committee how to function, but it may be proper to indicate some of the legal interests of the individual surgeon, physician, or consultant whose work may be reviewed by the Tissue Committee from time to time.

I was very much impressed by an article[1] in the *Journal of the American Medical Association* giving the conclusions of a specific Tissue Committee in particular cases. By quoting a few of these, the comment I then have to make, I think, will be much more definitely appreciated:

1. ". . . The doctor, as a consultant, advises cesarean section on a female patient, age 26, for pelvic deformity. His personal measurements of the

---

[1] Weinert, N. V., and Brill, R.: Effectiveness of hospital tissue committees in raising surgical standards. J.A.M.A., 1952, 150, 992.

pelvis are not recorded. X-ray findings are mentioned, but there is no X-ray record or documentation on the chart. In view of the absence of facts recorded and verified, surgery not indicated."

2. "Female, age 31, normal ovarian tissue removed. Committee opinion: surgery was not required. Diagnosis could not be made from history as recorded. Physical examination records no pelvic examination. No cysts at operation."

3. "Male, age 6. Unnecessary appendectomy in a case that, according to the chart, is a subsiding gastroenteritis."

There are many other types of Tissue Committee reports and conclusions quoted in this article.

Medical journals come into the hands of many laymen and many lawyers, as well as physicians. The existence and functioning of Tissue Committees is not unknown to the legal profession, and it will not be long unknown to those who make an effort to specialize in medical malpractice plaintiff's cases.

The records of the Tissue Committee are records of the hospital. An alert plaintiff's counsel can subpoena the Tissue Committee records just as he can subpoena any other part of the hospital records. In a case in which a malpractice claim or lawsuit has been filed and the Tissue Committee has reported that surgery was unjustified—that because of the absence of proper examinations and the absence of proper preliminary precautions no surgery was indicated, the conduct of the surgeon in question, and perhaps the conduct of the referring physician, and even the conduct of some of the staff of the hospital, is definitely established as negligence and malpractice. Unquestionably the case would get to a jury. There might be no explanation which would wash away the odium and the stigma of the Tissue Committee's report.

Ordinarily an attorney, in trying to determine whether or not there is liability in a case, seeks to gather all the information he can, studies the facts, and perhaps gets an opinion from some physician. However, the case is handmade for the plaintiff if he or his attorney learns that a Tissue Committee has denounced or condemned the surgery as being unnecessary or improvident—in one way or another an abuse of surgery, the Committee's conclusion being based not solely on the pathology, but on a study of the entire record.

My suggestion is this: The function of the Tissue Committee, while of great benefit to physicians, to the medical profession, to the hospital staff, and primarily to patients, is fraught with certain hazards. There are so many factors to be taken into consideration by a Tissue Committee, in addition to just the pathologic findings, that I propose that Tissue Committees proceed carefully and be very slow to condemn a fellow physician or surgeon in its reports and conclusions. In every instance in which it seems inevitable that the conclusion will be detrimental to a physician or surgeon, I recommend that he be given an opportunity to come before the Committee and explain any weaknesses and any loopholes or factors that seem to be missing which would have a bearing or influence upon the final conclusion. I recommend this step, because, once the Tissue Committee says that the surgeon, the referring physician, or the consultant has performed unnecessary surgery, the lawyer representing him in a malpractice defense case has more than enough work cut out for him.

WOMAN'S AUXILIARY NOTES

A bright, sunny day brought out the first spring hats and a large number of Auxiliary members and their guests for the Luncheon-Card Party on February 8. Following the regular business meeting, held in the Library of the Medical Society's building, our members gathered at the Kennedy-Warren for an afternoon of pleasure and profit—profit, because our Ways and Means Committee had worked so diligently to provide a table piled high with so many wonderful prizes that every person present had an excellent chance to carry off at least one; profit, too, because the proceeds added to our General Fund. High score prizes went to Mrs. Frank H. Wallace, Mrs. Murray Toomey, and Mrs. Stafford W. Hawken, these bridge enthusiasts remaining until nearly 6 p.m. to play off an exciting rubber. Mrs. George W. Ware, Ways and Means Chairman, wishes to thank the members of her hard-working committee for their contribution to the success of this affair. They are: Mmes. George Dewey, John P. Haberlin, John A. Long, Charles E. Law, Edward W. Nicklas, James A. O'Keefe and Arch S. Russell.

The first order of business at the meeting was to elect the Nominating Committee. It will be the duty of the following members, Mmes. Richard H. Todd, Brooks G. Brown, Rex E. Buxton, William R. Moses, Roger S. Williams, William J. G. Davis, and Herbert S. Gates, to prepare a slate of officers to be presented to the general assembly at the March meeting, at which time the officers for the next year will be elected by ballot.

March 30 is "Doctor's Day," a date selected to commemorate one of the greatest discoveries for the alleviation of pain and suffering. On this date in 1842 Dr. Crawford Long, of Jefferson, Georgia, first administered ether as an anesthetic to a human being. Recognition of the medical profession on this special day originated in Georgia over 20 years ago. The idea has spread until now most of the Auxiliaries participate in some way to honor our doctors on "Doctor's Day." A part of the observance is that all doctors wear a red carnation on this special day. Doctor, if your wife insists on pinning a posy to your lapel this March 30, please wear it! Her aim is to honor you and the entire medical profession.

Invitations are being mailed for our Annual Spring Dance on Saturday, April 7, at the Columbia Country Club. The Social Committee has worked hard to provide a most pleasurable evening. There will be a cocktail hour and a delicious dinner, plus an excellent orchestra.

Our Auxiliary is ready to present the handsome new flag to the Medical Society on President's Night, April 19, in the Medical Society's building. On this occasion the Medical Society will honor its Past Presidents at a reception to be held in the Library immediately following the program. Our House Committee will give its assistance to the Medical Society in arranging this gala evening.

Mrs. I. Phillips Frohman
Publicity Chairman

PATIENT REFERRALS REQUESTED FOR CLINICAL CENTER

The National Institute of Neurological Diseases and Blindness announces initiation of a study of the effects of neoplasms upon the central nervous system.

Interest is centered upon taking advantage of the intrusions of disease upon the central nervous system to extend to man basic physiologic-anatomic correlations observed in animal studies. Suitable patient material will consist of individuals suffering from untreated expanding lesions of the brain or spinal cord, selected to fit in the study categories listed below. Facilities are provided for screening patients suspected of tumor on an outpatient basis. It must be understood that patients are admitted primarily for a 4-week investigation period, and in instances where the disease is progressive in nature and in which present methods of treatment have been exhausted, that responsibility for indefinite care cannot be undertaken.

Special subjects for investigation in both the pre- and postoperative periods include: (1) a reëxamination of the optic pathways using both standard technics and some of the newer methods, such as flickerfusion campimetry, (2) a study of changes in personality, sleep and EEG patterns with lesions of the midline structures, (3) observations upon changes in sweating and heat control, particularly in instances of lesions above the medulla, and (4) changes in electrolyte metabolism associated with lesions about the third ventricle. Special attention will be directed toward evaluation of autonomic function with the use of special recording apparatus.

Depending upon the indications, surgical and/or radiation therapy will be instituted to achieve maximum functional restoration. Although X-radiation of many neoplasms of the central nervous system has proved disappointing with standard equipment, preliminary use of supervoltage, X-radiation with the 2-million-volt Van de Graaff apparatus and the intra-neoplastic instillation of radioactive substances have suggested that they will form a much more useful adjunct to decompressive surgery. This aspect of therapy will receive careful study both in the hospital and in the follow-up clinic.

At the termination of the study, a complete report of the findings will be sent to the referring physician. Any inquiries or patient referrals should be directed to Dr. J. M. Van Buren, Chief, Section of Clinical Neurology, National Institute of Neurological Diseases and Blindness, Bethesda, Md.

On the Lighter Side

If by chance this edition of the ANNALS is on your desk by March 21, 1956, you will have the unadulterated pleasure of reading this on the first day of Spring—the pleasure of Spring, I mean.

Old Andy Jackson's birthday will have passed almost unnoticed, St. Patrick's day will have come and gone, and we will be awaiting the joy of Palm Sunday and the sorrow of Good Friday. But to most amateur fishermen, the first day of Spring means only one thing; namely, fishing will be back soon and better than ever.

All through the long cold winter you have been eyeing the fishing rods standing so alone in the corner; or, you have had them down and apart doing the necessary oiling and cleaning and rewinding.

Fishing is not much fun in the winter when the wind blows icicles through your whiskers, and your feet feel like two cakes of ice. But fishing in the Spring! That is a different story! The wind tapers off its icy blow and settles down to a chilly breeze. The water, although still cold, bobs and dances and reflects the warm sun off its back. And you can keep your feet warm with the proper socks.

The fish know the difference too. Many an early season fisherman will feel the thrill of a tug on his line as a hungry finny denizen is pulled flopping from the water. After all, food is to a fish what it is to all creatures! You cannot fulfill that Spring mating urge on an empty stomach.

The boats, large and small, will need to be uncovered and inspected. The hulls need scraping, and maybe caulking, and soon the bottoms are responding to the slap of the paint brush.

Overhauling and cleaning the motors may take the better part of a weekend, but before you know it the old hulk looks new again as she slips down the bank into the water. What pride she carries as she bobs gently to and fro on the friendly waves! The sun will shine. the air will warm, and all the fishermen will be back at their grand sport before you can say "April showers."

I can see the Bay now—at the mouth of the South River, out from Franklin Manor, across from Herring Bay, or out from Solomon's—dotted with the whiteness that comes only from a well-kept boat. One cannot see the occupants too clearly from that distance, but one knows that Frank Ashburn, Louis Goffredi, Alec Preece, "Kelly" Waters, and a host of other doctor fishermen will be huddled in those white boats testing their skill as fishermen against the known wiliness of the fish.

CHUCKLE NOTES: A certain New York corporation official created quite a stir recently when he caused to be posted in the Board of Directors' room the following notice: "Executives who have no secretaries of their own may take advantage of the girls in the stenographic pool."

* * * * *

In a night club a diner pointed out a girl, at a neighboring table, who was wearing a low cut gown. "That girl," he said to his companion, "is wearing a $1,000 gown." "True, true," was the reply, "but you can see her heart isn't in it."

* * * * *

When a woman is young she wants to be old. When she is old she wants to be young. But most of her life she just wants. . . . Overheard: "By the time a man is old enough to afford marriage, he ought to have sense enough to avoid it." . . . Whenever a husband and wife have words, it is easy to guess which one gets to use them. . . . Employer to beautiful blonde who has just filled in a job application: "Miss Jones, under 'Experience' try to be a little more specific than just 'Oh Boy'!" . . . Overheard in a waiting room: "What makes you think the doctor is so smart? How come he has six children?" . . . For every man who lives to be 85 there are 7 women, but by that time it's too late. . . . A little boy came home after a lesson in natural history and said to his mother, "Is it true that I am descended from an ape?" "I cannot tell you," replied the mother, "I didn't know your father's people very well." . . . Helen: "What kind of a husband would you advise me to get?" Hazel: "You get a single man and leave the husbands alone." . . . Your religion gets the acid test when you find yourself in church with nothing less than a five-dollar bill. . . . "That's the spirit!" cried the happy medium as the table began to rise.

J. EARL KADAN, M.D.

SCIENCE FOR YOUTH

WATSON DAVIS

Director, Science Service, Washington

To inspire and encourage American youth in scientific, medical and technologic careers, there is a great science youth program in all parts of America.

This consists in large part of stimulating the participation of boys and girls of high school age in the doing of scientific projects and the exhibiting of their experiments in science fairs.

Science fairs are conducted by local committees. This is a "grassroots" operation which reaches youth with directness. Good teachers espouse and encourage it. Poorly equipped teachers cannot interfere. All the science factors in a community can coöperate. The hope is that there will be a science fair available to every high school student. Now, well over a third of the Nation is covered geographically. State academies of science and other science groups are taking leadership in the movement, coöperating with Science Service.

Each April, these science fairs are organized through encouragement and distribution of "know-how" by Science Service. Some 90,000 youth show their science and technology exhibits and projects. As top prizes, contestants in these local fairs are sent to the National Science Fair, conducted by Science Service each May in different cities. Approximately 190 exhibitors will attend the Seventh National Science Fair in Oklahoma City, May 10–12.

This year the American Medical Association is encouraging its county and state organizations to participate in these science fairs at the local or area level. Joining other scientific and professional organizations, colleges, industries, newspapers, service clubs, school systems, museums, etc., medical societies are offering professional aid and financial support to many of the approximately one hundred science fairs.

The AMA will present special citations and invitations to exhibit at its own Annual Meeting to the 2 boys or girls exhibiting the best display on medical research, general health, or physical fitness at the Seventh National Science Fair.

Dr. Alphonse McMahon, of St. Louis, Chairman of the AMA's Council on Scientific Assembly, in making the announcement, explained:

"The advancement of medical science depends on our developing and encouraging medical talent among high school students. We appreciate this opportunity to stimulate young scientists and to let them know that medicine is worthy of their talents.

"Our invitation to winning students to be guests of the AMA at our Annual Meeting in Chicago next June 11–15 will permit their work to be included among over 300 other medical exhibits, prepared and staffed by some of the world's most eminent physicians. Their displays will be part of the official Scientific Exhibit on Navy Pier, where more than 20,000 physicians will gather during the 5-day meeting."

The Washington Metropolitan Area has been active in holding science fairs. The Ninth Annual Washington, D. C. Science Fair was held in 1955. This year the Washington Fair has made a 4-to-1 split, since in addition to the fair held in Washington there will be Washington Area fairs in Prince Georges and Montgomery Counties in Maryland and in Arlington County in Virginia. The Washington Academy of Sciences and its affiliated scientific societies, of which the District of Columbia Medical Society is one, and the District Council of Architectural and Engineering Societies are sponsoring all four fairs. They are joined by the Boards of Education of the areas.

The time and place of these fairs will be: Washington, D. C., April 13–16, at American University; Prince Georges County, April 20–23, at Northwestern High School; Arlington County, April 20–24, at Wakefield High School; Montgomery County, April 25–27, at Kensington Junior High School. The two top winners of each of these fairs will be sent to the National Science Fair.

The Science Service program, in which the AMA is coöperating, is dedicated to the development of science talent among youth. It has been in operation since 1941. It is effective, widespread, and resultful in acquainting youth with science and technology. Experimental kits (THINGS of science), magazines (*Science News Letter* and *Chemistry*), services to news-

(Continued on page 176)

News and Personals

MEETINGS—Past and Future

The District IV Meeting of the American Academy of Obstetrics and Gynecology will convene at the Mayflower Hotel in Washington, April 6 and 7. An exceptional program has been arranged, including several symposia and panel discussions. Among the out-of-town speakers will be the following faculty members: Dr. Howard Tatum, Louisiana State University School of Medicine; Dr. Eugene Edwards, Northwestern University; Dr. Frank Lock, Bowman Gray School of Medicine; Dr. Walter Thomas, Duke University; Drs. Norman Thornton and Harry S. McGaughey, Jr., University of Virginia at Charlottesville; and Dr. Francis M. Ingersoll, Harvard Medical School. Major Paul Schafer, Chief of the Section of Surgery, Walter Reed Army Hospital, will speak Friday morning on "Obstetrical Practice in the Soviet Union: Personal Observations."

Several members of the District Medical Society will appear on this program. Dr. William S. Middleton, Chief Medical Director of Veterans Administration, will be the banquet speaker, Friday evening. His subject will be "The Basis for Medical Progress."

Dr. John Parks, Professor of Obstetrics and Gynecology, George Washington University School of Medicine, and Dr. George Raines, Professor of Psychiatry, Georgetown University School of Medicine, will participate in a Panel Discussion on Psychosomatic Gynecology; Dr. Robert Creadick, of Duke University, will be moderator.

Dr. Andrew Prandoni, Associate in Medicine, and Dr. James G. Sites, Instructor in Obstetrics and Gynecology, both of George Washington University School of Medicine, will be panelists to discuss Hypotensive Drugs in Toxemia of Pregnancy. For this panel Dr. Richard Bryant, of Cincinnati University School of Medicine, will be moderator.

Resident physicians from several out-of-town hospitals and from George Washington University, Walter Reed Army, D. C. General, Providence, and Georgetown University Hospitals will participate in this meeting.

The Kellogg Lectures, which are sponsored annually by the **George Washington University School of Medicine** through the financial assistance of the W. K. Kellogg Foundation of Battle Creek, Michigan, were held this year in February and March. Last of the series is a Panel Discussion on Preparation for Retirement. Dr. Edward J. Stieglitz, Consultant in Geriatrics to St. Elizabeths Hospital and Editor of *Geriatric Medicine*, will talk on "Emotional and Medical Problems." "Financial Aspects" will be discussed by Mr. Kenneth F. Brooks, Vice President and Trust Officer, and Mr. Henry K. Kierkoph, Trust Officer, both of Riggs National Bank. The meeting will be held in Hall A of the School of Medicine at 1335 H Street, N.W., beginning at 8:30 p.m. All physicians and medical students are cordially invited to attend.

The Medico-Chirurgical Society of the District of Columbia will hold its regular monthly meeting, March 22, in the auditorium of the Medical Society's building. Dr. Louis S. Reed, Research Director of the Subcommittee of Welfare and Pension Funds, U. S. Senate Committee on Labor and Public Welfare, will be the guest speaker; his subject, "The Impact of Labor Welfare Funds upon the Practice of Medicine."

Beginning at 8 o'clock the Doctors Symphony Orchestra, with Richard Wayne Dirksen conducting, will give a half-hour concert preceding the address.

Members of the D. C. Medical Society and others interested in the musical program or topic for discussion are cordially invited to attend.

The Section on Anesthesiology of the Medical Society of the District of Columbia and the D. C. Society of Anesthesiologists held a joint meeting at

METROPOLITAN AREA SCHEDULE OF MEETINGS

Organization/Institution	April 1956	May 1956
The Medical Society of the District of Columbia	President's Night Apr. 19	Business Meeting May 2
Walter Reed Army Medical Center Monthly Medical Meetings	Apr. 19	May 17
Naval Medical Center Guest Lecture Series	Apr. 26	—

George Washington University Hospital, February 6. The guest speaker was Dr. Virginia Apgar, Professor of Anesthesiology, Columbia University College of Physicians and Surgeons, who spoke on "The Neonatal Period."

The Mid-Atlantic Regional Research Conference of the American Psychiatric Association was held in Gaston Hall on the Georgetown University campus, March 9–10. "Research Techniques in Schizophrenia" was the theme of the Conference, which was sponsored by the Department of Psychiatry of Georgetown University School of Medicine. Guest lecturers included faculty members of the National Institutes of Health, Yale, Harvard, and Johns Hopkins Universities. Registrants were welcomed by Dr. Francis M. Forster, Dean of the School of Medicine, and by Dr. George N. Raines, Director of the Department of Psychiatry.

The Clinical Section of the Diabetes Association of the District of Columbia took advantage of the extra day in February to hold a meeting in the Medical Society's Library. Dr. Maurice Goldstein, of the Department of Endocrinology and Metabolism, Michael Reese Hospital, Chicago, was the guest speaker. His subject was "The Mechanism of the Action of Insulin."

The District Chapter of the American Academy of General Practice met, February 21, in the Library of the Medical Society. Dr. J. Burton Glenn, Director of the Cardiac Clinic, Sibley Hospital, discussed "Controversies in the Treatment of Myocardial Disease."

On December 20, the guest speaker for the Chapter's meeting was Dr. Ray Brown, Director of the Vascular Clinic, Leesburg Hospital, Leesburg, Va. He spoke on "Arterial Peripheral Vascular Disease."

GENERAL NEWS

The Executive Board of the Medical Society of the District of Columbia met, January 23, in regular session. In response to a request from the Washington Academy of Sciences for support of science education in the secondary schools of the Washington Metropolitan Area, the Board voted to contribute $50.00 toward the Annual Science Fair. Dr. Frederick O. Coe was nominated to succeed himself as Vice President, representing the District Medical Society, of the Washington Academy of Sciences.

President Morris reported that he had been asked to serve on the Advisory Committee of the Goodwill Industries. The Board approved Dr. Morris' acceptance of this appointment.

The Society was asked to appoint a representative on the Project Committee being organized by the United Community Services for a study of the blind population of the Washington Metropolitan Area. This project will be undertaken in coöperation with the Columbia Lighthouse for the Blind. Dr. William D. Foote was President Morris' selectee and the Board confirmed his appointment.

Dr. Lowell T. Coggeshall is the new **Special Assistant for Health in the Department of Health, Education and Welfare.** Sworn into office on January 31, he succeeds Dr. Chester S. Keefer, of Boston, who resigned, August 1, 1955.

Since 1947 Dr. Coggeshall has been Dean of the University of Chicago Division of Biological Sciences, which includes the University's Medical School. In this position he directed one of the coun-

Dr. Coggeshall

try's largest biological and medical research centers. He will be on leave from the University of Chicago.

An authority in the field of tropical medicine, Dr. Coggeshall was assigned by the Army Air Force during World War II to the Pan American Airways Africa, where he was responsible for establishing medical services along air routes through Africa and the Far East. Later, he was named Special Medical Consultant to the Secretary of War, and during his tenure in that post was in charge of the large tropical disease hospital for Navy and Marine personnel at Klamath, Oregon. When he completed his service in the Navy he held the rank of Captain.

AT.

Dr. Coggeshall received his medical degree at the University of Indiana in 1928, where he was also awarded the degree of Doctor of Laws in 1948. He is a Fellow of the American College of Physicians and a member of many other scientific organizations. In 1945 he received the Gorgas Award of the Association of Military Surgeons for achievement in tropical medicine.

The American Heart Association announces that a committee of its Scientific Council has drawn up a guide for the establishment and operation of blood vessel banks. Entitled, "Recommendations for the Establishment and Maintenance of a Blood Vessel Bank," the guide may be obtained from the Medical Director, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

Dr. Charles A. Hufnagel, Director of the Experimental Laboratory in Surgery, Georgetown University School of Medicine, was one of a committee of four cardiovascular surgeons who prepared the guide for the Association's Scientific Council. Other members were Drs. Jere W. Lord, Jr. and Abel A. Lazzarini, Jr., of New York, and Dr. Robert E. Gross, Boston.

The three medical schools of the District of Columbia have been awarded grants by the National Foundation for Medical Education in the following amounts: $36,214 to Georgetown University; $32,084 to George Washington University; and $26,654 to Howard University.

An announcement from the Washington Heart Association states that physicians who wish to present either papers or scientific exhibits at the **32nd Annual Meeting of the American Heart Association** must submit abstracts or make application to the Association's Medical Director no later than May 15. The meeting will be held in Cincinnati, Ohio, October 27–31.

Papers intended for presentation must be based on original investigation in or related to the cardiovascular field. The abstracts should offer in summary form the results obtained and the conclusions reached. Because of the expanded facilities available, there will be space for an increased number of both scientific and technical exhibits. Correspondence should be addressed to the Medical Director, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

The Department of Vocational Rehabilitation of the District of Columbia has moved into a new location at 819 Ninth Street, N.W. It was formerly housed in the temporary building at 14th Street and Pennsylvania Avenue, N.W., which is now being demolished.

The Doctors' Symphony Orchestra played for the residents of the Home for Incurables on Sunday evening, February 5. Richard Wayne Dirksen conducted.

A new medical journal from overseas has reached the Medical Society's Editorial Offices, the *Scottish Medical Journal.* The official organ of the Royal Medico-Chirurgical Society of Glasgow, and of the Edinburgh Medico-Chirurgical and Obstetrical Societies, it incorporates the *Edinburgh Medical Journal*, founded in 1805—the year of Trafalgar—and the *Glasgow Medical Journal*, founded in 1828. Conservative in format, the first issue, January 1956, contains 50 pages of text, consisting of five original scientific articles, one editorial, reports, and book reviews.

Dr. Malcolm T. MacEachern, a leader in the field of hospital administration, died in Chicago, February 3.

At the time of his death, Dr. MacEachern was Director of Professional Relations of the American Hospital Association. He had been Associate Director of the American College of Surgeons from 1923 to 1949, when he became Director. He was named Director Emeritus of ACS in 1951.

The name of Dr. MacEachern is synonymous with the hospital standardization program of the American College of Surgeons, forerunner of the Joint Commission of Accreditation of Hospitals. He was one of the founders and pioneers in the development of the program from its beginning in 1913.

He was a native of Canada, born in Ontario in 1881. In 1910 he received the degree of Doctor of Medicine and Master of Surgery from McGill University Medical School.

DR. SALK PRESENTED MEDAL BY CONGRESS

DR. JONAS E. SALK (left) is accepting a special gold medal, awarded by Congress, from THE HONORABLE MARION B. FOLSOM, Secretary of the Department of Health, Education and Welfare, in the latter's offices, January 26. In the center is REPRESENTATIVE IRWIN D. DAVIDSON, of New York, who introduced the resolution in Congress authorizing the award to Dr. Salk for his development of the polio vaccine.

On one side of the medal is a portrait of Dr. Salk; on the reverse, an allegorical figure protecting two normal children with the aid of a shield bearing a caduceus. In presenting the medal, Secretary Folsom read a letter from President Eisenhower in which he expressed the Nation's "lasting gratitude and appreciation" for this scientific contribution.

PERSONALS

Dr. William B. Looney, who was on active duty in the Naval Medical Corps from June, 1952 to June, 1955, was recently honored by the Secretary of the Navy for the outstanding achievements which characterized his tour of duty.

In his letter to Dr. Looney, the Secretary cited the following as particular examples of the manner in which his initiative, leadership and skillful application of professional knowledge reflected great credit upon the Navy:

> "Your work on the late effects of internally deposited radioactive materials which you concluded during your tour of active duty was a notable contribution to our knowledge of the toxicity of long-lived radioisotopes.
>
> "Your work in helping to set up a functioning radioisotope laboratory at the Naval Hospital in Newport, Rhode Island, following the fire of the *U.S.S. Bennington* enabled the Navy to be first in having a radioisotope laboratory flown to a disaster site and utilized in the clinical management of burn patients.
>
> "The many papers you presented at meetings of various medical societies is also felt to have contributed to the repute of American Naval medicine among medical men in this country and abroad.
>
> "Your work with the Egyptian Government in training Egyptian scientists in the use of radioisotopes and helping to establish a radioisotope laboratory in Egypt made it possible for the Naval Medical Department to play its part in implementing the President's Atomic Power for Peace program. It was also of value in fostering friendly relations with the Egyptian Government."

Dr. Looney, who is an Associate member of the District Medical Society, is presently residing in Cambridge, Mass., where he is associated with Professor Evans at the Massachusetts Institute of Technology.

Dr. J. Winthrop Peabody, Sr., Dr. Edgar W. Davis, and Dr. Charles A. Hufnagel, all faculty members of Georgetown University School of Medicine, participated in the Interim Session of the American College of Chest Diseases in Boston, November 27 and 28. Dr. Peabody, who is Chairman of the Council on Postgraduate Medical Education of the College, attended the executive sessions of the Board of Regents of the College. He was one of the hosts and Dr. Hufnagel, a participant, in the Fireside Conferences, November 28, at which Dr. Hufnagel discussed "Advances in Cardiac Surgery." Dr. Davis was a panelist at the Diagnostic-Treatment Conference earlier in the day.

Early in December, Dr. Peabody was in California, where he participated in several meetings. On December 5 he made the opening address at the Postgraduate Course on Diseases of the Chest in Los Angeles. In the evening, as banquet speaker, he gave an address on "Postgraduate Medical Education in Diseases of the Chest."

Prior to this meeting, Dr. Peabody was a guest of Dr. Alfred Goldman, Director of the Cardiac Hospital, City of Hope Medical Center, in Duarte, December 2. In the evening he was a guest of the Medical Club at a dinner in Mexicali. The following day he visited the Imperial Valley Tuberculosis Sanatorium in Holtville, where he participated in the weekly conference on Diseases of the Chest.

Lt. Colonel John A. Norcross, MC, USA, formerly of Washington, D.C., received widespread publicity early in February for delivering a premature baby in a military plane 11,000 feet over the Pacific. The story which appeared in the Washington papers stated that Mrs. John Garnett, of San Antonio, Texas, started the 700-mile flight, February 4, from Johnston Island to Honolulu because she had developed premature labor pains. There was no incubator on Johnston Island, where her husband, an airman, was stationed. Colonel Norcross, who happened to be aboard the plane, delivered the baby by what he called "backwoods obstetrics." He was able to keep the 7-months' baby alive by artificial respiration and by improvising an incubator with a curtain, an oxygen mask, and a thermos bottle of hot coffee.

Colonel Norcross, a native of the District of Columbia, received his medical degree from George Washington University. He enlisted in the Air Force during World War II and later practiced in Washington as a surgeon before rejoining the Air Force in 1951. He was a member of the Medical Society from 1946 to 1951.

Colonel Norcross recently received a Commendation Ribbon for his medical services in Tokyo with the Far East Air Force.

Dr. Murray M. Copeland, Professor of Oncology, Georgetown University School of Medicine, was appointed Chairman of the Cancer Control Committee of the National Cancer Institute, PHS, on October 1, 1955.

He has been appointed to the National Awards Committee for a cancer education project sponsored jointly by the National Science Teachers' Association and the National Cancer Institute, PHS.

He has been reappointed a member of the Educational Committee of the national organization of the American Cancer Society, Inc., for 1956–57.

Dr. Harold Jeghers, Professor and Director of the Department of Medicine, Georgetown University School of Medicine, gave two lectures in Philadelphia, November 15, 1955. The first was the annual lecture of the Medical Guild of St. Rene Goupil; the title of his address was "The Problem of Postgraduate Medical Education for Practitioners." He addressed the house staff of the Philadelphia General Hospital on the subject, "Oral Lesions Indicative of Systemic Disease."

On November 8, Dr. Jeghers was guest teacher for the Department of Medicine at the University of Maryland Hospital in Baltimore. He lectured on the topic, "Oral Lesions Indicative of Systemic Disease," conducted the morning teaching ward rounds with students and house staff, and was the case discussor at the Medical Grand Rounds, which centered about the topic of pyelonephritis.

Dr. Jeghers addressed the house staff at Boston City Hospital, October 26, on "Clinical Aspects of Melanin Pigmentation."

Four members of the District Medical Society participated in the Sectional Meeting of the American College of Surgeons, which was held in Philadelphia, at the Bellevue-Stratford, February 13–16.

At the morning meeting, February 14, **Dr. Brian Blades,** Professor of Surgery, George Washington University School of Medicine, read a paper on "The Solitary Circumscribed Lesions of the Lung." The following day, in a Symposium on Diseases of the Breast, **Dr. Murray M. Copeland,** Professor of Oncology, Georgetown University School of Medicine, discussed "Benign Breast Lesions Which Have an Increased Incidence of Malignant Potentiality Associated with Them." The same afternoon **Dr. Charles A. Hufnagel,** Director of Georgetown's Experimental Laboratory in Surgery, was moderator for a Panel Discussion on Peripheral Vascular Surgery.

On February 15, **Dr. Robert J. Coffey,** Professor of Surgery at Georgetown, presented a paper on "Surgical Management of Calcific Pancreatitis." He also collaborated in a Panel Discussion on Biliary Tract Surgery.

In a specialty session on Thoracic Surgery, Dr. Blades contributed a paper on "Surgical Treatment of Hiatal Hernia."

Drs. Sol Katz and Edgar W. Davis participated in the program of the Annual Clinical Conference of the Louise Obici Memorial Hospital in Suffolk, Virginia, January 18. Dr. Katz, who is Chief of the Pulmonary Division, D.C. General Hospital, read a paper entitled, "Biopsy Procedures in the Diagnosis of Pulmonary and Pleural Diseases." He also was moderator of a Panel Discussion on Medical and Surgical Diseases of the Lung. Dr. Davis, who is Professor of Thoracic Surgery at Georgetown University School of Medicine, was a panel participant and spoke on "Mediastinal Tumors."

Drs. Julius S. Neviaser, William J. Tobin, and Murray M. Copeland attended the meeting of the American Academy of Orthopedic Surgeons in Chicago on January 30–February 2, 1956. All three physicians gave instructional courses at this meeting—"Round Cell Tumors Involving Bone," Dr. Copeland; "Injuries In and About the Shoulder Joint," Dr. Neviaser; and "Clinicopathologic Aspects of Arthritis," Dr. Tobin, who also discussed a paper on "Vertebral Lipping."

On January 26–27, prior to the Academy meeting, Drs. Tobin and Copeland served as members of the examiners group for the Part II examination of the American Board of Orthopedic Surgery.

Two papers presented at the Southeastern Surgical Congress in Richmond, Va., March 12–15, were authored by Washington physicians. **Drs. Donald Stubbs and Harry Lee Claud** gave a joint presentation on "Recovery Rooms for the Safer Care of Surgical Patients." **Drs. Charles S. White and Charles S. White, Jr.,** were co-authors of a paper on "The Surgical Management of Upper Gastrointestinal Hemorrhage of Undetermined Cause."

Dr. Harry S. Bernton participated in the Preconvention Scientific Assembly of the American Academy of Allergy, held in St. Louis, Mo., February 5. In a symposium chairmanned by Dr. Charles A. Janeway, Professor of Pediatrics at Harvard Medical School, Dr. Bernton presented a paper on "The Prophylaxis of Asthmatic Bronchitis in Childhood with the Administration of Gamma Globulin."

Dr. Murray M. Copeland, of Georgetown University School of Medicine, **and Theodore Wiprud,** Secretary and Executive Director of the District Medical Society, were guest speakers at the Sixth Annual Scientific Assembly of the Virginia Chapter of the American Academy of General Practice, held at The Homestead in Hot Springs, Va., March 2–4. The topic discussed by Mr. Wiprud, March 2, was "Look Again, Doctor." The following day Dr. Copeland presented a paper on "Palliative Care of Inoperable and Incurable Cancer and Related Neoplasm."

Dr. H. A. Monat was recently appointed Governor for the District of Columbia of the American College of Gastroenterology.

Dr. Theodore Winship, Senior Pathologist at Garfield Memorial Hospital, gave two lectures at the Atlanta Graduate Medical Assembly in Atlanta, Ga., February 20–22. "Cat Scratch Disease" and "Lipoid Pneumonia" were the topics presented. He also served on a Round Table Conference on Oncology with Dr. Philip Thorek, of Chicago, and Dr. Charles C. Harrold, of New York.

Theodore Wiprud, Secretary and Executive Director, **and Lawrence A. Zupan,** Assistant Secretary, of the Medical Society of the District of Columbia, attended the First Institute of the Medical Society Executives Conference, at the Drake Hotel in Chicago, February 6, 7, and 8, 1956.

The meeting was opened with a brief talk by the President, Mr. M. C. Smith, of Lincoln, Nebraska, followed by greetings from Dr. George F. Lull, Secretary and General Manager of the American Medical Association. Mr. Wiprud was the first speaker on the program which followed. The topic he discussed was "The Medical Society Executive—Yesterday, Today, and Tomorrow."

Drs. Edith H. Weigert, Leon Salzman and Hewitt I. Varney participated in a Lecture Series devoted to "The Interrelationship between Religion and Psychiatry," sponsored by the Washington School of Psychiatry and the Washington Seminar on Religion and Psychiatry.

Dr. Weigert, who is Director of the Washington Psychoanalytic Institute, spoke at the second session, January 20, at All Souls Church, on "The Psychopathology of Religious Experience." Dr. Salzman, a member of the faculty of the Washington School of Psychiatry, gave a talk the same evening on "Mortification Phenomena in Religion and Psychiatry." A third session, held on February 17, concerned the general topic of "Morals and Medicine." Among the speakers was Dr. Varney.

Dr. Salzman is also Clinical Associate Professor of Psychiatry at Georgetown University School of Medicine and is an Active member of the District Medical Society. Drs. Weigert and Varney are Associate members. Dr. Varney is also on the Georgetown faculty as Assistant Professor of Clinical Pediatrics.

Dr. Murray M. Copeland addressed the Clinical Society of the Elizabeth General Hospital at Elizabeth, N.J., December 20, on "Premalignant Tumors of the Breast."

On January 17 he was in Cincinnati, where he spoke before the Cincinnati Surgical Society on "Recent Advances in the Treatment of Inoperable and Incurable Recrudescent Cancer and Related Neoplasms."

Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, was in Dallas, Texas, January 12 and 13. On January 12 he addressed the Dallas Neuropsychiatric Society on the subject of "Mental Health" and the following day, the Dallas Mental Health Society. Before the latter group he spoke on "The Hospital Care of the Mentally Ill."

Dr. Jacob J. Weinstein was invited to participate in the Pan American Congress of Gastroenterology, held in Havana, Cuba, January 27. Dr. Weinstein read a paper entitled, "A New Approach to the Diagnosis and Prognosis of Carcinoma of the Colon."

Dr. Roland B. Scott, Chief of Pediatrics, Freedmen's Hospital, was elected to fellowship in the American Academy of Allergy at its Annual Meeting in St. Louis, Mo., February 4-7, 1956.

Dr. Benjamin Rones addressed the Columbus Ophthalmological Society, in Columbus, Ohio, January 9. His subject was "Some Observations on the Behavior of Iris Tumors."

The turn of the year usually brings a number of changes in the Medical Society's membership and 1956 is no exception. The following members have left Washington to accept administrative posts in other cities or to practice elsewhere.

Dr. Henry J. Carstens has been transferred to the Veterans Administration Office in Springfield, Mass. His address is 83 Longhill Street, Springfield 8. While in Washington he was Chief of the Internal Medicine Division of the VA's Department of Medicine and Surgery.

Dr. Dwight M. Kuhns is now associated with the Harlan Hospital in Harlan, Kentucky. As Colonel in the Medical Corps of the U. S. Army, he was on the Washington staff of the Office of the Surgeon General of the Army for many years. More recently he was Deputy Director of the Armed Forces Institute of Pathology.

Captain Henry G. Bullwinkel, MC, USN, retired from the Navy, December 31, and is planning to open an office in The Medical Center in Salisbury, Maryland.

Dr. Mary S. Fisher, radiologist, formerly with Groover, Christie and Merritt, has left Washington and writes that she will probably not return to practice in the District of Columbia. Her present address is 127 B. Wallworth Park Apartments, Haddonfield, N. J.

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
November 22	Dr. Julius Schreiber	The Emotionally Healthy Family	Adult Group, Chevy Chase Recreation Center
November 30	Dr. Julius Schreiber	Mental Health in Industry	Labor Relations Section of United Community Services
December 4	Dr. Julius Schreiber	Emotional Problems of Young Adults	Montgomery County Unitarian Church
December 6	Dr. Julius Schreiber	Emotional Basis of Successful Marriage	Northeast Hebrew Congregation
December 13	Dr. Julius Schreiber	Modern Women in Search for Emotional Fulfilment	St. James Church
December 13	Dr. Bernard Ostrow	Present State of Treatment of Heart Disease	Southeast Optimists Club
December 23	Dr. Julius Schreiber	The Psychodynamics of Prejudice and Discrimination	Arlington-Fairfax Community Center
January 15	Dr. Leonard A. Scheele	Medical Progress and the American Hospital	Jewish Consumptive Relief Society
January 20	Dr. Brian Blades	Lung Cancer	Nurses of the Metropolitan Area
February 2	Dr. George Maksim Dr. Addison M. Duval	Competing with Health Who's the Mixed-up Master—Parent or Child?	Commissioners' Youth Council
February 7	Dr. Ernest A. Gould	Discussion of film, Breast Self-Examination	Women's Army Corps Veterans Association
February 7	Dr. Bernard J. Walsh	Rehabilitation after Cardiac Illness	Metropolitan Washington Industrial Nurses Association
February 7	Dr. Jason Geiger	The Medical Aspects of Tuberculosis	Woodside Elementary School Parent-Teachers Association
February 7	Dr. C. Willard Camalier	Discussion of film, The Cancer Story	Interstate Commerce Commission Employees
February 16	Dr. Morris Kleinerman	Two Approaches to Mental Health	Institute of Adult Studies, Congregation Beth El, Montgomery County, Md.
February 21	Dr. Charlotte Donlan	Discussion of film, Breast Self-Examination	Southeast Business and Professional Women's Club

Dr. Nell K. Levy left Washington in January and is now residing in Cincinnati, Ohio.

Dr. Elliot Migdal, who was associated with the Mental Hygiene Clinic of the Regional Office of Veterans Administration in Washington, is now on the staff of the Mental Hygiene Clinic of the Summit County Receiving Hospital at Cuyahoga Falls, Ohio.

Dr. Ernst Trier Morch has been appointed Professor and Director of Anesthesiology at the University of Chicago and is now affiliated with the Chicago Medical Society. In 1950 Dr. Morch left Washington to become Associate Professor of Anesthesiology at the School of Medicine, University of Kansas.

Dr. Herbert N. Munhall has moved to Phoenix, Arizona.

Dr. Charles F. Finley is now on the staff of the Fontana Hospital at Fontana Dam, North Carolina.

Dr. Patrick B. Storey writes that he completed his services in the Medical Corps of the U. S. Army in June and has now accepted a full-time position on the staff of the Veterans Administration Hospital in Baltimore, where he is Acting Chief of the Medical Service.

MEMBERSHIP

The following applicants for membership will be voted on at the meeting of the Executive Board, April 23, 1956.

For Active Membership

Helen D. Capone, Ottawa University, Ontario, Canada—1951
Robert W. Ireland, Johns Hopkins University—1953
Harold Martin Silver, Columbia University—1949
Frank M. Trozzo, Jr., Georgetown University—1954

For Associate Membership

Lawrence S. Lilienfield, Georgetown University—1949
Robert D. Neubecker, University of Rochester—1949
Douglas W. Terry, University of Texas—1949
John C. Watson, University of Virginia—1937
Edward S. Witowski, Jr., Georgetown University—1951

For Resident-Intern Membership

Joseph E. Bartkowski, Georgetown University—1951

Recent changes in membership status:

Active to Associate

John R. Conley
Charles F. Finley
David A. Harris
Alfred E. Jackson
John A. Kennedy
Albert D. Kistin
Herbert E. Martyn, Jr.
Mor J. McCarthy
Glen Pincock
Charles J. Savarese
John A. Swartwout
Theresa Woo

Active to Affiliate
Carolyn S. Pincock
Meyer Rosenbaum
Joseph O. Romness

Associate to Affiliate
Allan M. McKelvie

Reinstated to Active
Thomas H. Alphin

Reinstated to Affiliate
Thomas M. Wilson

Resigned
Active

Herbert N. Munhall
Tom D. Rasen
Patrick B. Storey
Louise O. Wensel

Associate

Anthony Brunse
Henry G. Bullwinkel
Henry R. Carstens
Mary Stuart Fisher
Clifton Himmelsbach
John Kehoe
William P. Kellow
Dwight M. Kuhns
Henry A. Latane
Nell K. Levy
Albert E. Long
Elliot Migdal
Ernst T. Morch
James M. Moss
Charles T. Nicholson
Sidney Olansky
Harvey J. Tompkins

Science for Youth—Davis

(*Continued from page 167*)

papers, radio programs, etc., are Science Service activities that support and implement the science youth program.

About 350,000 boys and girls in junior and senior secondary schools participate in 15,000 science clubs affiliated, at no cost, with Science Clubs of America, sponsored by Science Service. These groups, with the basic material furnished, conduct, inspire and encourage science experiment and experience through the six golden years of high school education. They are a foundation to the science fair program.

The annual Science Talent Search for the Westinghouse Scholarships, conducted by Science Service, the fifteenth of which culminates in 1956, selects from all the high school seniors of continental United States those whose scientific skill, talent and ability indicate a potential creative originality.

The Science Talent Search is the pioneering demonstration that successful scientists of the future can be spotted at the high school level. Studies of 40 winners and 260 honorable mentions chosen each year show that they fulfill magnificently their expectations, more than half going on to doctoral degrees. Entrants in 30 states have the opportunity of further recognition in state searches.

Additional participation in this national science youth program, at national and local levels, will augment the future supply of scientists and engineers, including the medical and health fields.

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *April*, 1956 NUMBER 4

CARDIAC GLYCOSIDES*

THEODORE KOPPANYI, PH.D.

Professor of Pharmacology and Materia Medica, Georgetown University School of Medicine

JAMES J. LEONARD, M.D.

Medical Officer, Pulmonary Disease Division, District of Columbia General Hospital; Instructor in Medicine, Georgetown University School of Medicine

PHARMACOLOGY

CARDIAC GLYCOSIDES and their main source, crude digitalis leaf (*Digitalis purpurea*; common foxglove), are but one of the several therapeutic agents for treating congestive heart failure. Congestive heart failure, whatever its cause, constitutes the chief indication for their administration, although they may be used "prophylactically" in cases of low cardiac reserve or ectopic rhythms, when the danger of overt decompensation is imminent.

It is obvious that, since digitalis and similar drugs are employed in the above conditions, their only therapeutically important effect is either directly or indirectly upon the heart. Their extracardiac actions are either negligible or produce early toxic manifestations.

The early British school recommended the use of digitalis and purified glycosides only in congestive heart failure associated with auricular fibrillation. A group of physicians led by Harvard and the Cornell group, which may be called the American school, emphasized that digitalis is effective in congestive heart failure even with normal sinus rhythm.[1, 2] The underlying principles characterizing these two schools of thought deal with the mode of action of cardiac glycosides. The Britishers claimed that the mechanism of action of digitalis principles consists of cardiac slowing achieved either by stimulation of the medullary vagal center or of direct effect on atrioventricular conduction. The vagal effect consists of the restoration of unhampered vagal impulses by decreasing the dilatation of the auricles and of abolishing the accelerating reflexes which radiate from the distended atria and veins. There is little or no direct stimulation of the cardio-inhibitory center by digitalis.[3] There is some evidence, however, that the SA node itself is sensitized by cardiac glycosides to vagal impulses. The prolongation of the atrioventricular conduction, due to depression of the AV node, as reflected by a lengthened P-R interval up to 0.3 second or longer further contributes to the slowing of the heart. In toxic doses digitalis may produce complete heart block. It is now known that the early phase of cardiac slowing is due to vagal effect, whereas the later phase and the effect produced by larger doses of the drug are due to auriculoventricular dissociation. When physical exercise or atropinization (2 mg. or more) significantly increases the rate of the digitalized heart, the slowing is mainly vagal, while when these methods fail to produce such cardiac acceleration, the slowing is due to an effect on the conduction system.[4, 5] The electrocardiographic alterations of therapeutic digitalis action are shown in figure 1.

---

* This is the fifth of a series of comprehensive reference articles on topics of current medical interest prepared by invitation for the MEDICAL ANNALS.

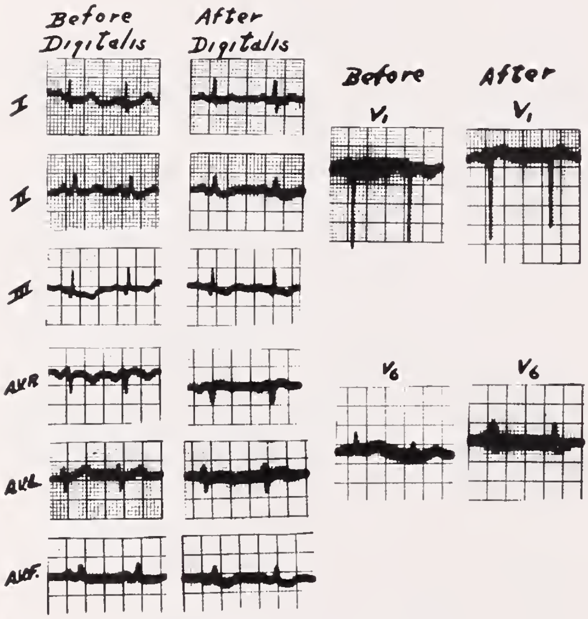


FIG. 1. A comparison between tracings taken before and after digitalis administration. Note the shortening of the QT interval and the diminution in the amplitude of the T wave with the appearance of an ST segment which is shifted in a direction opposite to the QRS complex.

There is little doubt that this type of digitalis action is very effective in the "prophylactic" use of digitalis and contributes materially to the therapeutic effect of the drug in congestive failure associated with auricular fibrillation. It does not, however, explain the over-all therapeutic effects of cardiac glycosides. The most important action of this group of drugs in the hypodynamic, failing heart, when the beats are feeble and ineffective and fail to drain the large veins efficiently, is a gradual restoration of the declining systolic force. Experiments carried out with the isolated mammalian papillary muscle showed that it is actually an increase of the force of the contraction of the heart muscle without any effect on the resting length of the heart muscle or tone that occurs as a result of the contact of the heart with digitalis. This action exists whether congestive heart failure is associated with auricular fibrillation or normal sinus rhythm.[6, 7, 8]

In addition to their effects on the force of the systolic contraction, the cardiac glycosides also produce an improvement in the oxygen utilization of the heart muscle. In congestive failure there is a progressive decrease in oxygen utilization, and the cardiac stimulants restore the normal metabolism of the heart in more than three-fourths of the patients.[9, 10] The combination of the above principal therapeutic effects obviously produces an increased stroke volume, faster circulation time, and fall of elevated venous pressure.[11] Digitalis principles are not diuretics in the true sense, but, with the improvement of congestive failure, mobilization of the edema fluid into the veins takes place and thus diuresis occurs. In the absence of edema, cardiac glycosides do not produce diuresis.[12] It should be added that the high venous pressure and the fast heart rate are usually not the causes but the results of congestive failure.

There is no doubt that in congestive failure the heart enlarges because it does not empty sufficiently. In untreated cases of failure the dilatation of the heart is an adaptation to maintain optimum capacity for work. Under the influence of cardiac glycosides, because of the increase in systolic force the ventricles empty more completely, with resultant reduction of the systolic and diastolic size of the heart. The underlying basic mechanism of digitalis effect at the cellular level is probably that the cardiac glycosides restore the balance between oxidative

Dr. Koppanyi

Dr. Leonard

The authors invited to write the special article this month, DR. THEODORE KOPPANYI and DR. JAMES J. LEONARD, both faculty members of Georgetown University School of Medicine, are well chosen to evaluate anew the glycosides in the treatment of congestive heart failure.

The senior author, Dr. Koppanyi, a member of the Georgetown faculty for nearly a quarter of a century, has had a notable career in teaching not only at Georgetown but at the University of Chicago, Syracuse University, Cornell University, and New York Hospital. His writings have included both books and articles. His scientific book for lay reading, "The Conquest of Life," was a selection of the Scientific Book-of-the-Month Club. His articles have dealt mainly with regeneration of the central nervous system, pharmacology of barbiturates, and autonomic drugs. The Koppanyi-test was the first sensitive and specific method for the identification of barbiturates.

Dr. Koppanyi was born in Hungary and obtained his doctorate at the University of Vienna, Austria, in 1923. The same year, at the age of 21, he came to the United States as an instructor in physiology. His chief hobby is traveling, as proof of which he admits to having crossed the Atlantic Ocean 43 times.

Dr. Leonard graduated from Georgetown University School of Medicine in 1950. He interned at the University Hospital the following year, and in 1951–52 was Junior Assistant Resident in Medicine. He spent one year as Assistant Resident in Medicine at the Boston City Hospital, and then returned to Georgetown Hospital to serve a fellowship in clinical cardiology under Dr. W. Proctor Harvey (1953–54). In 1954–55 he was an American Trudeau Fellow at the D. C. General Hospital under the direction of Dr. Sol Katz. He is presently Assistant Medical Officer of the Pulmonary Disease Division at D. C. General and Instructor in Medicine at Georgetown. Dr. Leonard missed being a native Washingtonian by one year. With his wife and 2 small boys, he plans to spend next year in Durham, N. C., where he will be engaged in cardiovascular research at Duke University.

processes and the utilization of energy-rich phosphates. The hypodynamic heart is little able or unable to extract phosphate and energy from adenosine triphosphate (ATP). Administration of cardiac drugs makes it possible for the muscle fibril protein to utilize available phosphate-bond energy. Digitalis glycosides, therefore, tend to use up ATP, and when ATP is depleted because of inhibition of phosphorylation, digitalis becomes very toxic even in small doses.[13, 14]

SELECTED CARDIAC DRUGS AND THEIR POSOLOGY (FIGURE 2)

Probably the dried digitalis leaf and its 10 per cent tincture are still most generally used. The potency of digitalis leaf is such that, when assayed biologically by the official method, 0.1 Gm. shall be equivalent to not less than 1.0 U.S.P. Digitalis Unit. One United States Pharmacopeial Digitalis Unit represents the potency of 0.1 Gm. of the U.S.P. Digitalis Reference Standard. With the exception of gitalin (Gitaligin), all the purified glycosides are standardized by chemical and physical methods. Of the cardiac glycosides, digitoxin, lanatoside C, digoxin, gitalin, ouabain, and thevetin are most frequently used. The glycosides of squills, the scillarens, and urginin are also employed by some physicians.

The cardiac glycosides are chemically hydroxylactones of sterol hydrocarbons, which means that there is an unsaturated lactone ring in place of an hydroxyl at the position of C-17 of the sterol nucleus. In place of the hydroxyl radical at the C-3 position there are various sugars which give the compound the chemical character of a glycoside. Without the sugars, the compound is called aglycone or genin. The aglycone of digitoxin, for example, is referred to as digitoxigenin. Both the genins and the complete glycosides act similarly, although the latter, for some reason, have a later onset and longer duration of action. The steroid ring without the unsaturated lactone or the lactones without the steroid ring have no cardiac activity. It is an interesting observation that cardiac glycosides can maintain the lives of completely adrenalectomized animals very much like adrenocortical steroids.[13] LeWinn[15] observed gynecomastia also during digitalis therapy, a result which certainly looks like a hormonal effect.

Digitalis leaf, or rather the active glycosides in the leaf, are absorbed from the gastrointestinal tract only to the extent of 20 per cent, and therefore its full, rapid digitalizing dose is relatively high—1.2 Gm., i.e., 12.0 U.S.P. Digitalis Units, or more. The dose of the tincture of digitalis is, of course, 10 times that of the leaf (12.0 c.c. or more). The leaf and the tincture must be given in divided doses, otherwise the large amounts of nonabsorbable glycosides in the crude drug produce nausea and vomiting in 25 per cent of the patients. Even when the above dose of crude digitalis is given for over a period of 24 or 48 hours, reflex vomiting may occur because of the irritant effects of the glycosides on the mucous membranes of the upper gastrointestinal tract. The onset of the full effects of these two preparations varies between 36 and 72 hours.

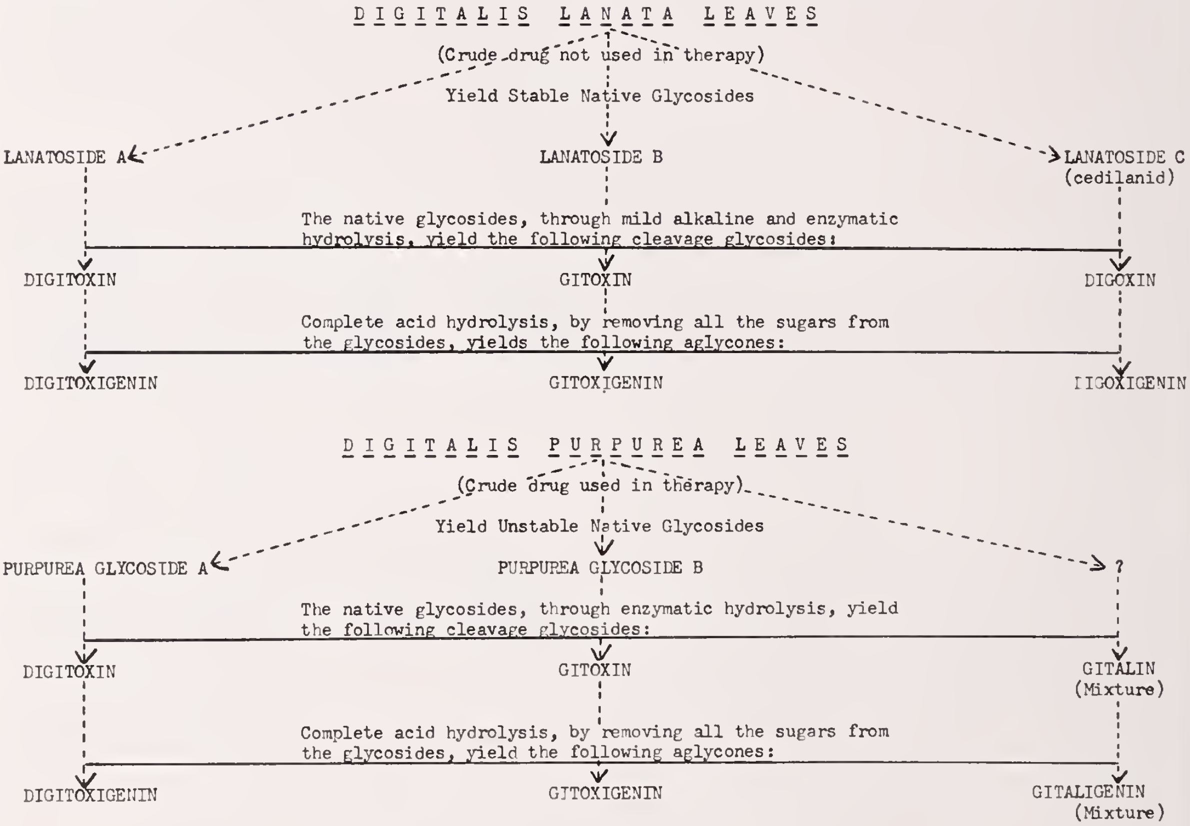

DIGITALIS LANATA LEAVES
(Crude drug not used in therapy)
Yield Stable Native Glycosides
LANATOSIDE A
LANATOSIDE B
LANATOSIDE C
(cedilanid)
The native glycosides, through mild alkaline and enzymatic hydrolysis, yield the following cleavage glycosides:
DIGITOXIN
GITOXIN
DIGOXIN
Complete acid hydrolysis, by removing all the sugars from the glycosides, yields the following aglycones:
DIGITOXIGENIN
GITOXIGENIN
DIGOXIGENIN
DIGITALIS PURPUREA LEAVES
(Crude drug used in therapy)
Yield Unstable Native Glycosides
PURPUREA GLYCOSIDE A
PURPUREA GLYCOSIDE B
?
The native glycosides, through enzymatic hydrolysis, yield the following cleavage glycosides:
DIGITOXIN
GITOXIN
GITALIN
(Mixture)
Complete acid hydrolysis, by removing all the sugars from the glycosides, yield the following aglycones:
DIGITOXIGENIN
GITOXIGENIN
GITALIGENIN
(Mixture)

FIG. 2. Showing the derivation of digitalis principles.

Since digitoxin is completely and uniformly absorbed from the gastrointestinal tract, the full digitalizing dose is the same whether the drug is administered orally or intravenously.[16] It is possible to administer digitoxin (from 1.2 to 1.6 mg., seldom more) at one time, with the full therapeutic effect appearing between 6 and 10 hours. Another way of administering digitoxin is to give 0.6 mg. initially, and then 0.3 mg. every 8 hours until optimum effects are obtained. Both the crude drug and digitoxin have a long duration of action and therefore should not be given if the patient had been recently under some form of digitalization.

Lanatoside C, a glycoside obtained from digitalis lanata, is absorbed from the gastrointestinal tract only to the extent of about 10 per cent. This is demonstrated also by the fact that the full, rapid digitalizing dose when given by mouth varies from 6.0 to 10.0 mg., whereas, when given intravenously it is as low as from 1.2 to 1.6 mg. The onset of action of this drug is more rapid and the duration of action considerably shorter than that of digitoxin.[17]

Digoxin is a so-called cleavage glycoside of lanatoside C, obtained by mild enzymatic or alkaline hydrolysis, and therefore it is very similar in its action to lanatoside C. It is one of the most completely absorbable cardiac glycosides, the oral dose for rapid, full digitalization varying between 2.0 and 4.0 mg., and the intravenous dose between 0.7 and 1.0 mg. Like lanatoside C, its onset of action is quicker and its persistence of action briefer than that of digitoxin.[18]

Gitalin is not a pure glycoside as formerly believed, but rather a mixture. Its rate of elimination is slower than that of digoxin but faster than that of digitalis leaf or digitoxin. Recent studies indicate that its margin of safety is wider than that of other cardiac glycosides. If this is true, gitalin should be the drug of choice in the treatment of congestive failure. However, more evidence than is now available is necessary to establish this observation. This compound is usually given orally because it is fairly well absorbed from the alimentary tract, with the full, rapid digitalizing dose varying between 5.0 and 8.0 mg. There is some evidence that when given by vein its digitalizing dose is almost identical with the oral. It is best to administer gitalin in divided doses, approximately every 6 hours.[19]

Ouabain and thevetin are used only for emergency digitalization and only by the intravenous route, since they are irregularly and poorly absorbed from the intestine. Their speed and duration of action are very brief. Ouabain is given in doses of 0.25 to 0.5 mg., repeated every 12 hours or even more frequently. Thevetin, the most rapidly acting and the most quickly eliminated cardiac glycoside, in doses of about 5.0 mg., may produce complete digitalization 6 minutes after injection, with disappearance of effects within from 2 to 3 hours.[20]

There are many other cardiac glycosides of plant and animal origin, but it is doubtful that the claims for them make it necessary to employ them routinely in the treatment of impending or overt congestive heart failure.

Once rapid and full digitalization is accomplished, the treatment by means of cardiac glycosides is by no means over. With a few exceptions, digitalis therapy must be continued, usually throughout the patient's lifetime. Digitalis principles are eliminated from the body, and the portion eliminated must be replaced daily. This is called the maintenance dose. The maintenance dose is not a rigidly fixed amount, but varies from patient to patient. Even with digitoxin, it might be as low as 0.05 mg. or as high as 0.3 mg., daily. The more rapidly the glycosides are eliminated, the higher the daily maintenance dose (see table 1).

Instead of rapid digitalization, in mild ambulatory cases of congestive failure the so-called cumulative method of digitalization may be used. This consists of administering a fraction of the full digitalizing dose daily until the heart is under the full effect of digitalis. The underlying theory of the cumulative digitalization is quite simple. Cardiac glycosides are cleared exponentially, i.e., the amount eliminated daily is a certain percentage of the dose administered. Following full and rapid digitalization, the same per cent of digitalis is eliminated, but since the original dose is high, the eliminated portion is relatively large. With smaller doses, approaching the daily maintenance dose, the eliminated portion is small, and with daily administration of this small dose, increasingly larger amounts of digitalis are retained in the body. After several weeks full digitalization may be accomplished, particularly with digitalis leaf, digitoxin and gitalin, which are more slowly eliminated than some other purified glycosides. Once full digitalization is accomplished by means of the cumulative method, a daily maintenance dose, approximately of the size used following rapid digitalization, must be given.

TABLE 1

Oral Administration of Digitalis Principles

(Doses calculated for adult patients who received no digitalis for 2 weeks. For children, the doses are correspondingly smaller in the ratio of their total body surface area, and not their weight.)

Drug	Rapid Digitalizing Dose*	Daily Maintenance Dose*	Remarks
Digitalis (purpurea leaf)	1.0 to 1.6 Gm. (10 to 16 U.S.P. digitalis units)	0.05 to 0.25 Gm. (½ to 2.5 U.S.P. digitalis units)	Onset of full therapeutic action—from 36 to 72 hours. Duration—most of the drug eliminated within 2 weeks.
Tincture of digitalis	10.0 to 16.0 c.c. (10 to 16 U.S.P. digitalis units)	½ to 2.5 c.c. (½ to 2.5 U.S.P. digitalis units)	Same as above
Digitoxin	1.0 to 1.6 mg.	0.05 to 0.25 mg.	Onset of action—about 10 hours. Duration—most of the drug eliminated within 2 weeks.
Lanatoside C	5.0 to 10.0 mg.	0.5 to 2.0 mg.	Onset of action—more rapid. Duration—shorter.
Digoxin	0.75 to 1.5 mg.; in some cases up to 4.0 mg.	0.25 to 0.75 mg.	Onset of action—from 2 to 6 hours. Duration—most of the drug eliminated within 2 days
Gitalin	4.0 to 8.0 mg.	0.25 to 1.0 mg.	Onset and duration of action—intermediate

* The size of the doses depends not only upon the biologic variability to drug responses and weight, but also upon the severity of congestive failure.

SPECIFIC THERAPEUTIC USES

CONGESTIVE HEART FAILURE

As has been stated, it has been well established in recent years that digitalis is very useful in hypodynamic heart failure even in the presence of normal sinus rhythm. Acute studies show that the cardiac output and stroke volume increase and that lowering of venous pressure and slowing of the rate are secondary to recompensation. It is also now firmly established that in congestive heart failure cardiac glycosides are the primary drugs to use, and salt restriction and diuretics are to be employed in conjunction with and not in preference to digitalis. However, digitalis may be ineffectual when congestive failure is due to active myocardial disease such as that associated with generalized systemic infection. Also, in far advanced myocardial failure, the toxic therapeutic ratio may be reversed so that digitalis cannot be employed because moderate doses are without beneficial effects and may cause severe toxic manifestations. In acute rheumatic myocarditis, it is the rule that the usual digitalizing doses are ineffective and the toxic manifestations are frequent.[21]

CHRONIC AURICULAR FIBRILLATION WITH A FAST VENTRICULAR RATE

It is in cases of chronic auricular fibrillation with a fast ventricular rate and congestive heart failure that digitalis produces its most striking results. The drug, by slowing the ventricular rate and obliterating the pulse deficit as well as by increasing the force of systolic contraction, markedly increases the cardiac output. It is usually stated that the criterion for full digitalization is slowing of the ventricular rate by creating partial atrioventricular block. There is no linear relationship between the dose administered and the ventricular slowing under such circumstances. Actually, small doses of digitalis may lower the apical rate from the range of 140 to 150 to about 90 to 100, but to further slow the rate to 70 to 80 may require much more of the drug. Occasionally, one-half or less of the digitalizing dose may slow the rate to normal.[4] Under such conditions, the slowing is all due to the vagal effect of the drug, and slight exercise or atropine may release this brake so that the heart rate returns to the pretreatment level. Actually, exercise or atropine will increase the rate somewhat (10 to 20 beats per minute) even though digitalization is adequate, but if with exercise there is no excessive increase, digitalization is complete.[4]

Occasionally there is great difficulty in controlling the ventricular rate in a patient with auricular fibrillation. This occurs in spite of apparently adequate dosage of digitalis. Under such circumstances, investigation should be directed toward a possible cause of this phenomenon such as embolism,[22] fever, poisoning, infections, anemia, thyrotoxicosis, rheumatic activity, pulmonary insufficiency, or electrolyte disturbances. Frequently, in the face of these complications, control of the rate is impossible, regardless of the amount of digitalis administered.[23] In this situation further digitalis may cause toxicity and the rate may actually increase due to heightened cardiac excitability. The approach to such a problem is to correct the complicating toxic state at which time the ventricular rate will slow.

Not uncommonly a patient with auricular fibrillation shows, following digitalization, ventricular slowing and obliteration of the pulse deficit. At such time the ventricular rate may be 85 to 95, and extra digitalis is given to bring the rate down to between 70 and 80. Such an effort may result in the reappearance of a pulse deficit, with the rhythm becoming highly irregular again. Electrocardiograms at this time will show that the pulse deficit is no longer due to uncontrolled irregular supraventricular beats, but to frequent extrasystoles. In other words, the patient is overdigitalized and intoxicated rather than underdigitalized.

Another danger signal in the management of fibrillating patients who are digitalized is the appearance of a rapid rate which is regular. This "regularization"[24] of the ventricular response may represent a nodal tachycardia. Regardless of the mechanism, such a sequence of events spells digitalis intoxication. Further digitalis will only cause the rate to increase.

CHRONIC AURICULAR FIBRILLATION WITH A SLOW RATE

Older patients, with or without heart failure, frequently fibrillate with very slow ventricular rates (40 to 80 per minute). Unless such patients are reverted to normal sinus rhythm with quinidine, digitalization is indicated as a "prophylactic" measure against a possible tachycardia which may appear following various stress situations (e.g., pneumonia, surgery, etc.). In such patients, if failure is present, the slow rate is no contraindication to digitalization. Under such circumstances digitalization will not produce so striking an improvement as is true of patients with fast ventricular responses to auricular fibrillation, but the drug will still be beneficial through its direct action on the myocardium. In fact, a person may, in the absence of digitalis, fibrillate at a rate of 60 to 65 and still have a pulse deficit. Although the over-all rate per minute is slow, it may be very irregular with short runs of rapid response and partially or totally ineffective contractions. In addition, these patients may on exercise have a much more rapid rate.

PAROXYSMAL AURICULAR FIBRILLATION

Paroxysmal auricular fibrillation usually occurs in individuals with underlying heart disease.

Such persons may have had no previous symptoms or clinical evidence of cardiac involvement. Nevertheless, when subjected to certain stressful conditions, they may fibrillate paroxysmally. The classical examples of this sequence of events are the middle-aged or elderly patients who, upon developing pneumonia or severe gastrointestinal bleeding, are found to be fibrillating. This is found even in the face of a negative cardiac history. Under such circumstances the ventricular rate is always fast and, if not slowed, will in hours or days lead to congestive failure. It seems obvious that such patients should be digitalized to control their rate. Some investigators have reported that digitalis under such circumstances is ineffectual in slowing the excessive ventricular rate.[23] Our experience and that of other clinicians does not support this concept. Naturally, digitalis cannot be expected to slow the rate to normal in the presence of a high fever or when there is an "acute abdomen." Such patients would be expected to have tachycardia with a sinus rhythm. But digitalis will control excessively fast ventricular response to the fibrillating auricles until the toxic state has abated.

About 5 to 10 per cent of patients having paroxysms of auricular fibrillation have absolutely no cardiac disease.[25, 26, 27] The attacks are usually precipitated by emotional disturbances, and the otherwise healthy person may not be inconvenienced except for the awareness of "palpitation." Under such conditions sedation or the use of quinidine without digitalization will usually terminate the attack and may be effective in preventing subsequent ones. Recently we have seen 2 healthy men about 30 years of age and without heart disease, both of whom were fibrillating paroxysmally during a bout of alcoholic gastritis. In 1 case the rhythm reverted spontaneously to normal after mild sedation (figure 3). The other patient acted similarly after 1 dose (0.4 mg.) of lanatoside C.

Rarely a patient with little or no heart disease may, as a result of auricular fibrillation and a fast ventricular rate, develop heart failure over a period of days.[27] In such cases digitalis is necessary. Digitalis may also be effective in preventing or diminishing the paroxysms of auricular fibrillation when sedation or quinidine have failed. Idiopathic fibrillators in the older age groups may become somewhat short of breath during paroxysms of rapid auricular fibrillation. Under such circumstances digitalis is employed in order to control the rapid ventricular rate so that, although attacks may still recur, the symptoms resulting from the rapid ventricular rate are prevented. These are but a few examples of the "prophylactic" value of cardiac glycosides.

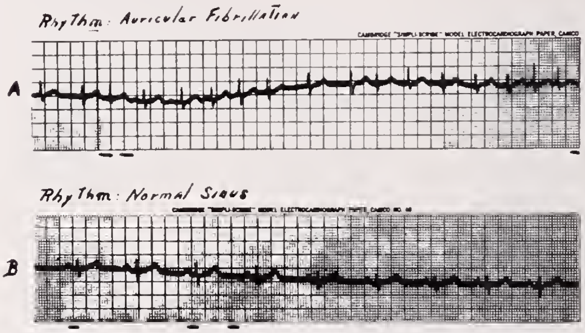


FIG. 3. A 32-year-old white man with alcoholic gastritis noted palpitation and slight shortness of breath on walking from his bed to the bathroom. (A) A strip of lead II revealing the presence of auricular fibrillation. (B) A strip of lead II reveals reversion of rhythm to normal sinus mechanism after 24 hours of bed rest with mild sedation.

AURICULAR FLUTTER

This arrhythmia occurs about one-fifth to one-tenth as often as auricular fibrillation.[28, 29, 30] In general, it has the same etiology and responds to the same type of therapy.[31] It is a less stable arrhythmia than fibrillation. In the face of heart disease this arrhythmia may be treacherous, in that control of the ventricular rate can be quite difficult. Large amounts of digitalis may be required to slow the heart.[28, 32] These patients, when not on any previous medication, show a flutter with a 2:1 atrioventricular block and a resultant regular ventricular rate, usually between 140 and 180.[33] With the use of cardiac glycosides one of three changes takes place.[34] The most common result is for digitalis to increase the auricular rate until it breaks into fibrillation.[28, 35] When such a change takes place, the ventricular response is much more readily controlled. In most of the remaining cases the auricular mechanism persists, but after adequate digitalis administration the atrioventricular conduction is depressed and the ventricular rate slows, due to an increased block (an auricular flutter with a 3:1, 4:1, or varying atrioventricular blocks). This is the type of case in which management is often difficult, because the usual doses of digitalis may have no effect on conduction. Fortunately, for some reason these patients tolerate rather well the large amounts of glycosides necessary to change the 2:1 conduction. Once the rate slows following digitalization, the cardiac rhythm should be checked either by electrocardiogram or by auscultation with the aid of carotid pressure. This fact is important, because frequently on the hospital wards patients are seen who, after digitalization, slow to a rate of 75 to 80, with a regular rhythm. These findings are taken to represent conversion to normal sinus rhythm, but the electrocardiogram may show persistent auricular flutter with a pure 4:1 block, an auricular rate of 300, and a ventricular rate of 75.

Occasionally auricular flutter may revert to normal sinus rhythm directly without passing through an evanescent state of fibrillation.[28, 35] How often this actually occurs after digitalization is difficult to state. Any patient shown to be fluttering by electrocardiographic examination and later found to have normal sinus rhythm may have experienced a period of auricular fibrillation just prior to conversion, without clinical recognition of this fact.

Certain cases of auricular flutter reverting to normal sinus rhythm are one of the few, possibly the only example of the condition in which digitalis does not have to be administered continuously, and in which a single digitalizing dose often suffices. It is reasonable to assume that the withdrawal of digitalis, i.e., the pharmacologic effects of the drug to convert the flutter to fibrillation, is responsible for the cure. Once digitalis is eliminated, the chemically-induced fibrillation ceases.

CONVERSION OF AURICULAR FLUTTER AND FIBRILLATION

In general, efforts to revert these arrhythmias should first be directed at slowing the ventricular rate.[27, 36] Once the rate has been slowed to the range of 70 to 80, about one-third to one-half will revert spontaneously, depending on the type of heart disease. The majority of the remaining cases can then be converted with quinidine.[37, 38] The use of quinidine will be more successful if the patient is first digitalized. In addition, with increasing doses of quinidine the auricular rate is slowed considerably. At auricular rates of 200 or below, 1:1 atrioventricular conduction may take place, unless an atrioventricular block is present due to digitalis.[28] This complication is a grave one and often accompanied by syncope or shock.

PAROXYSMAL AURICULAR TACHYCARDIA

This arrhythmia is usually a benign one because it occurs more frequently in young people without heart disease. Most attacks can be terminated with direct or reflex (both can be drug-induced) vagal stimulation. When these measures fail, digitalis will terminate an attack, probably due to its effect on the sensitized pacemaker.

PAROXYSMAL VENTRICULAR TACHYCARDIA

This arrhythmia, as previously stated, may be the result of digitalis toxicity and, of course, is contraindicated under such conditions. Ventricular tachycardia is best treated by procaine amide or quinidine. If vigorous attempts to convert this arrhythmia fail and the patient is in heart failure, it may be necessary to give digitalis. Recent work indicates that digitalis may cause reversion in some of these refractory cases, and it has also shown that, although digitalis may fail to change the rhythm, it is apparently not a harmful drug to give under these circumstances.[39]

HEART BLOCK

Complete heart block with congestive failure is not a contraindication to the administration of digitalis. However, it is necessary to show first that the heart block is not a toxic manifestation of previous digitalization.

PULMONARY HEART DISEASE

Cor pulmonale is an alteration in the cardiopulmonary interrelationship resulting in pulmonary hypertension, which in turn causes hypertrophy and later failure of the right ventricle. This pulmonary hypertension is caused by anatomic and physiologic changes in the pulmonary vascular bed.[40] The anatomic change is the obliteration of large amounts of the cross sectional area of the vascular bed. The physiologic change is reflex spasm due to anoxia and hypercapnia. Therefore, there is increased resistance to flow and increased work to be performed by the right ventricle. Before failure sets in cardiac output is normal or increased, depending partially on whether or not the arterial unsaturation is severe enough to cause secondary polycythemia.

Rapid digitalization has resulted in a significant increase in the cardiac output of patients suffering from right heart failure due to lung disease. The increase in cardiac output has not been as striking in this type of failure (18 per cent average)[41] as it has been in left ventricular, hypostatic failure due to hypertension or arteriosclerosis (39 per cent).[18] In addition, the acute studies show that the increased output is accompanied paradoxically by an augmentation in the pulmonary hypertension.[42] Thus, the work of the right ventricle is increased. The sequence of events is not paradoxical when one considers that, with a fixed pulmonary resistance, any increase in cardiac output must be accompanied by increase in pulmonary artery pressure and right ventricular work.

Restoration of the diminished cardiac output to its previous level will not, of course, help the patient's symptom of dyspnea which was not due to failure in the first place. Also, digitalis used without any attempt to decrease the work of the right ventricle by lowering the resistance to flow in the pulmonary circuit will be only partially successful in that decompensation will again take place as a result of the abnormal work load. If digitalis is used in addition to vigorous efforts to reduce anoxia by breaking up the bronchospasm, thinning and liquefying secretions, and clearing up infectious exudates, the result will be a decrease in the work load of the right ventricle and continued compensation.[43]

Such a situation is analogous to the treatment of heart failure due to severe hypertension with digitalis. The heart will fail again unless an attack is made on the basic problem of the increased load resulting from high blood pressure. When these facts are appreciated, it is obvious that digitalis has a place in the treatment of cor pulmonale.

HIGH OUTPUT FAILURE

The failure due to thyrotoxicosis, beriberi, anemia, arteriovenous fistula, Paget's disease, etc., is most effectively and most rationally treated by remedying the basic defect with drugs, surgery, vitamins, and blood transfusions. There are times, however, when digitalis is helpful and may even be lifesaving in each of these conditions. First of all, when patients with the above diseases exhibit an overt failure, coronary artery heart disease may be the basic underlying cardiac disability, and hence the patient will respond, although moderately, to digitalis. In thyrotoxicosis, digitalis may be necessary to control the rate if auricular fibrillation is present. It will not be possible to decrease the rate to normal while the patient is toxic, but excessive rates can be controlled. Frank heart failure due to thyrotoxicosis in the absence of arrhythmias is rare without underlying heart disease,[44, 45] and, in fact, some authors deny its existence.[46]

In anemic heart disease it is well to remember that a patient who develops signs and symptoms of heart failure with a hematocrit of 50 per cent of normal or greater probably has in the background some other type of heart disease.[47] As a result, digitalis may be indicated. Nutritional deficiency of thiamine (beriberi) causes peripheral vasodilatation and decreased peripheral resistance, and resultant increased cardiac output may lead to failure.[48, 49, 50] This defect, regardless of its duration, is quickly reversed in a few hours after the administration of thiamine. The myocardial lesion is not similarly affected, and over a period of time the metabolic deficiency of pyruvate-utilization causes certain irreversible changes in the myocardium.[51] Such a patient usually requires digitalis in addition to specific correction of the vitamin deficiency. It may be necessary to continue digitalis even after the dietary deficiency is corrected.

MECHANICAL HEART DISEASE

In tight mitral stenosis, short of correction of the valvular obstruction the most rational approach to this condition is to increase diastolic-filling time as much as possible. When the pacemaker is the sinus node, digitalis will not slow the heart rate. But with the onset of auricular fibrillation, through the use of digitalis it may be possible to keep the rate slower than it was when sinus rhythm was present. Such patients do better after the onset of auricular fibrillation. It is a well known fact that patients with longstanding mitral stenosis, upon developing relative tricuspid insufficiency, are relieved of their most troublesome complaint, severe dyspnea. On the other hand, increasing the right heart output against the fixed resistance at the mitral orifice increases the pressure and blood volume in the pulmonary circuit, so that dyspnea may be as severe as ever although edema and visceral congestion are relieved.

CONSTRICTIVE PERICARDITIS

This is another type of purely mechanical heart disease in which there is an obstruction to cardiac filling and a fixed stroke volume. Cardiac output can be increased only by increasing the rate. It should be remembered that such a fibrous or calcific encasement is an obstruction to effective contraction as well as relaxation,[52] and that there is always some extension of the process from the epicardium into the muscle.[53] Patients with hearts in a "calcium cast" for years develop "disuse atrophy" and require digitalis. not only before operation when failure is present, but also postoperatively as an aid in maintaining effective cardiac output. Such medication may be required for 6 months to a year after operation, or it may be necessary indefinitely if myocardial fibrosis is extensive.

USE OF DIGITALIS BEFORE SURGERY

Digitalis is frequently used prophylactically in patients known to have paroxysms of cardiac arrhythmias. Thus it is well to digitalize an elderly patient in preparation for surgery if such a patient should give a history of previous bouts of auricular fibrillation or flutter. Patients with mitral stenosis in whom surgery is indicated should receive digitalis prior to surgery because of the high incidence of supraventricular arrhythmias during the operation or the postoperative period. On the other hand, the use of digitalis to prevent heart failure in individuals who have no signs of failure but merely enlarged hearts is not recommended because there are no physiologic data to support it. Many investigators[54-61] over the years have repeatedly shown that cardiac output of both normal individuals and those with cardiomegaly is either unchanged or decreased upon digitalization. In fact, in some cases the decrease was up to 36 per cent. In addition, physiologic studies failed to show a change in venous pressure, mean auricular pressure, or right ventricular pressure. As Harvey[60] has pointed out, these studies do not answer the question of prophylactic digitalization. The information which would be pertinent is the manner in which digitalization increases cardiac output under stress of exercise or operation. At present such information is not available.

Digitalis Toxicity

Despite the care with which digitalization is carried out by the medical profession, severe toxic symptoms and even a few deaths each year are reported.[62] The toxic reactions are closely related to the therapeutic use because in many cases digitalis preparations, in order to be effective, must be given in amounts exceeding the usual doses. It is a well-known fact that the more severe the congestive failure, the larger amounts are necessary for its control. The margin of safety in these instances is fairly narrow. Fortunately, in most cases the early appearance of minor toxic symptoms warns the physician to lower the dosage or discontinue the administration of cardiac glycosides altogether. These early toxic symptoms consist of extracardiac effects of digitalis on the central nervous system, e.g., light-headedness, flickering in front of the eyes, and disturbances of color vision; most notable are anorexia, nausea, and vomiting (direct effect on the central emetic mechanism—not to be confused with reflex vomiting due to gastrointestinal irritation).[63, 64] Unfortunately, even these latter symptoms are absent in a few patients severely poisoned by digitalis. In such cases the physician must depend on the cardiac toxic symptoms, which embrace almost every type of ectopic rhythm previously absent in the patient (figure 4). Excessive bradycardia, ectopic beats, coupling, and finally ventricular tachycardia may be discovered by periodic electrocardiographic examinations. Ventricular tachycardia is a particularly dangerous signal because it is a prefibrillatory phase. Recently paroxysmal auricular tachycardia with block has received much attention as a sign of digitalis toxicity. In 12 cases seen in a medium-sized hospital over a 1-year period, 10 were probably due to digitalis overdosage with either absolute or relative potassium deficiency. One must differentiate this from the so-called idiopathic variety, which is not due to digitalis. The necessity for differentiating these is that in the idiopathic variety digitalis may be helpful and indeed necessary in order to slow the ventricular rate by increasing the block. Unfortunately, there is no specific antidote for digitalis poisoning, and one must rely mainly on bed rest and making the patient comfortable. If the patient has normal kidney function, 2.0 Gm. of potassium chloride may be given orally (or intravenously in smaller doses), preferably every hour until the patient shows improvement of the cardiac irregularity. This treatment was suggested from the observation that toxic concentrations of digitalis cause a loss of potassium from the myocardium.[65] Atropine is useless. There is some evidence, although not generally accepted, that the administration of calcium or hypercalcemia aggravates the symptoms of digitalis poisoning.

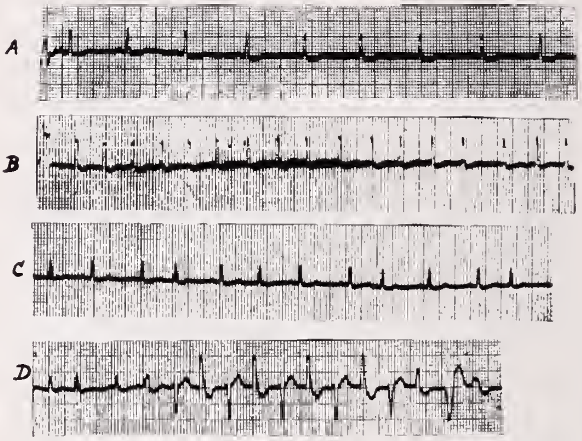


Fig. 4. Four tracings taken on the same patient at different times during the course of digitalis toxicity complicated by electrolyte disturbances. All tracings are lead I. (A) Normal sinus rhythm and digitalis effect. (B) Auricular fibrillation with a rapid ventricular response and periods of regularization of the ventricular rhythm. (C) Paroxysmal auricular tachycardia with block, a rhythm frequently but not always due to digitalis intoxication. (D) A burst of bidirectional ventricular tachycardia; another arrhythmia almost always due to digitalis toxicity.

BIBLIOGRAPHY*

1. Koppanyi, T.: Digitalis—pharmacology. Bull. Georgetown Univ. M. Center, 1947–48, 1, 166.
2. Walsh, B. J.: Digitalis—clinical use. Ibid., 1947–48, 1, 169.

---

* Editor's note: In this series the bibliography will be presented more fully than customary so that reference material can be readily identified.

3. Heymans, C., Bouckaert, J. J., and Regniers, P.: Sur le mécanisme réflexe de la bradycardie provoquée par les digitaliques. Compt. rend. Soc. de biol., 1932, **110,** 572.
4. Gold, H., Kwit, N. T., Otto, H., and Fox, T.: On vagal and extravagal factors in cardiac slowing by digitalis in patients with auricular fibrillation. J. Clin. Invest., 1939, **18,** 429.
5. Gold, H., Kwit, N. T., Otto, H., and Fox, T.: Physiological adaptations in cardiac slowing by digitalis and their bearing on problems of digitalization in patients with auricular fibrillation. J. Pharmacol. & Exper. Therap., 1939, **67,** 224.
6. Gold, H., and Cattell, M.: Mechanism of digitalis action in abolishing heart failure. A.M.A. Arch. Int. Med., 1940, **65,** 263.
7. Gold, H.: Pharmacologic basis of cardiac therapy. J.A.M.A., 1946, **132,** 547.
8. Luten, D.: The Clinical Use of Digitalis. Springfield, Ill.: Thomas, 1936.
9. LaDue, J. S., and Fahr, G.: Effect of intravenous administration of lanatoside C upon output, diastolic volume, and mechanical efficiency of failing human heart. Am. Heart J., 1943, **25,** 344.
10. Peters, H. C., and Visscher, M. B.: Energy metabolism of heart in failure and influence of drugs upon it. Ibid., 1936, **11,** 273.
11. McMichael, J.: Pharmacology of the failing human heart. Brit. M. J., 1948, **2,** 927.
12. Peters, J. P.: Problem of cardiac edema. Am. J. Med., 1952, **12,** 66.
13. Paley, H. W.: Cardiotonic glycosides: some aspects of their chemistry and pharmacology with special reference to digitalis and its derivatives. Texas Rep. Biol. & Med., 1955, **13,** 882.
14. Wollenberger, A.: On the energy-rich phosphate supply of the failing heart. Am. J. Physiol., 1947, **150,** 733.
15. LeWinn, E. B.: Gynecomastia during digitalis therapy. New England J. Med., 1953, **248,** 316.
16. Gold, H., Kwit, N. T., and Cattell, M.: Studies on purified digitalis glucosides. I. Potency and dosage of "digitaline Nativelle" by oral administration in man. J. Pharmacol. & Exper. Therap., 1940, **69,** 177.
17. LaDue, J. S.: Intravenous use of digitalis glycosides. South. M. J., 1943, **36,** 124.
18. Harvey, R. M., Ferrer, M. I., Cathcart, R. T., Richards, D. W., Jr., and Cournand, A.: Some effects of digoxin upon heart and circulation in man. Digoxin in left ventricular failure. Am. J. Med., 1949, **7,** 439.
19. Batterman, R. C., DeGraff, A. C., and Rose, O. A.: Therapeutic range of gitalin (amorphous) compared with other digitalis preparations. Circulation, 1952, **5,** 201.
20. Modell, W., Kwit, N. T., Dayrit, C., Shane, J., Zahm, W., Kramer, M. L., and Gold, H.: Studies on purified digitalis glycosides; thevetin, a glycoside with unusual speed of action in man. J. Pharmacol. & Exper. Therap., 1948, **94,** 44.
21. Taran, L. M.: Therapeutic regimen for rheumatic heart disease in children. J. Pediat., 1948, **33,** 226.
22. Tench, W. R.: Triad of tachycardia digitalis toxicity and mercurial-fast edema in congestive heart failure complicated by pulmonary embolism. Am. J. Med., 1955, **19,** 868.
23. Hellman, E., Attcheck, M. R., and Enselberg, C. D.: Treatment of urgent cases of paroxysmal auricular fibrillation. Am. J. M. Sc., 1951, **221,** 655.
24. Loun, B., and Levine, S.: Current Concepts in Digitalis Therapy. Boston: Little, 1954.
25. Stroud, W. D., LaPlace, L. B., and Reisinger, J. A.: Etiology, prognosis and treatment of auricular fibrillation. Am. J. M. Sc., 1932, **83,** 48.
26. Parkinson, J., and Campbell, M.: Paroxysmal auricular fibrillation: record of 200 cases. Quart. J. Med., 1930, **23,** 67.
27. Phillips, E., and Levine, S. A.: Auricular fibrillation without other evidence of heart disease: a cause of reversible heart failure. Am. J. Med., 1949, **7,** 478.
28. McMillan, T. M., and Bellet, S.: Auricular flutter; some of its clinical manifestations and its treatment. Am. J. M. Sc., 1932, **184,** 33.
29. Wedd, A. M.: Clinical auricular flutter. Ann. Int. Med., 1924, **3,** 69.
30. Blackford, J. M., and Willins, I. A.: Auricular flutter. A.M.A. Arch. Int. Med., 1918, **21,** 147.
31. Herrmann, G. R., and Hejtmancik, M. R.: Atrial flutter; methods of treatment. Am. Heart J., 1951, **41,** 182.
32. Freedberg, C. K.: Diseases of the Heart. Philadelphia: Saunders, 1951.
33. Levine, S. A., and Harvey, W. P.: Clinical Auscultation of the Heart. Philadelphia: Saunders, 1949.
34. Bloomfield, A. L.: Treatment of auricular flutter. Am. J. Med., 1949, **7,** 437.
35. Parkinson, J., and Bedford, D. E.: Course and treatment of auricular flutter. Quart. J. Med., 1927, **21,** 21.
36. Brown, M. G.: Management of established auricular fibrillation with especial reference to use of quinidine. Mod. Concepts Cardiovas. Dis., 1952, **21,** 138.
37. McMillan, R. L., and Welfare, C. R.: Chronic auricular fibrillation; its treatment with quinidine sulfate. J.A.M.A., 1947, **135,** 1132.
38. Sokolow, M., and Edgar, A. L.: Blood quinidine concentrations: guide in treatment of cardiac arrhythmias Circulation, 1950, **1,** 576.
39. Gilson, J. S., and Schemm, F. R.: Use of digitalis in spite of the presence of ventricular tachycardia. Ibid., 1950, **2,** 278.
40. Cournand, A.: Some aspects of pulmonary circulation in normal man and in cardiopulmonary diseases. Ibid., 1950, **2,** 641.
41. Ferrer, M. I., Harvey, R. M., Cathcart, R., Webster, C. A., Richards, D. W., and Cournand, A.: Some effects of digoxin upon heart and circulation in man; digoxin in chronic cor pulmonale. Ibid., 1950, **1,** 161.
42. Gray, F. D., Jr., Williams, M. H., and Gray, F. G.: Circulatory and ventilatory changes in chronic pulmo-

nary disease as affected by lanatoside C. Am. Heart J., 1952, **44,** 517.

43. Harvey, R. M., Ferrer, M., and Cournand, A.: Treatment of chronic cor pulmonale. Circulation, 1953, **7,** 932.

44. Andrus, E. C.: Heart in hyperthyroidism. Am. Heart J., 1932, **8,** 66.

45. Read, J. M.: Cardiac status after prolonged thyrotoxicosis. Ibid., 1932, **8,** 84.

46. Ernstene, A. C.: Cardiovascular complications of hyperthyroidism. Am. J. M. Sc., 1938, **195,** 248.

47. Brannon, E. S., Stead, E. A., Jr., Warren, J. V., and Merrill, A. J.: Hemodynamics of acute hemorrhage in man. Am. Heart J., 1946, **31,** 407.

48. Keefer, C. S.: Beriberi heart. A.M.A. Arch. Int. Med., 1930, **45,** 1.

49. Weiss, S., and Wilkins, R. W.: Nature of cardiovascular disturbances in nutritional deficiency states (beriberi). Ann. Int. Med., 1937, **11,** 104.

50. Blankenhorn, M. A., Vilter, C. F., Scheinker, I. M., and Austin, R. S.: Occidental beriberi heart disease. J.A.M.A., 1946, **131,** 717.

51. Benchimol, A. B., and Schlesinger, P.: Beriberi heart disease. Am. Heart J., 1953, **46,** 245.

52. Sawyer, C. G., Burwell, C. S., Dexter, L., Eppinger, E., Goodale, W. T., Gaslin, R., Harken, D., and Haynes, F.: Chronic constrictive pericarditis; further consideration of pathologic physiology of the disease. Ibid., 1952, **44,** 207.

53. Harvey, R. M., Ferrer, M., Cathcart, R. T., Richards, D. W., and Cournand, A.: Mechanical and myocardial factors in chronic constrictive pericarditis. Circulation, 1953, **8,** 695.

54. Harrison, T. R., and Leonard, B. W.: Effect of digitalis on cardiac output of dogs and its bearing on action of drug in heart disease. J. Clin. Invest., 1926, **1,** 36.

55. Burwell, C. S., Neighbors, DeW., and Regen, E. M.: Effect of digitalis upon output of heart in normal man. Ibid., 1928, **5,** 125.

56. Cohn, A. E., and Stewart, H. J.: Relation between cardiac size and cardiac output per minute following administration of digitalis in which heart is enlarged. Ibid., 1928–29, **6,** 27.

57. Stewart, H. J., and Cohn, A. E.: Studies on effect of action of digitalis on output of blood from heart; effect on output in normal human hearts; effect on output of hearts in heart failure with congestion, in human beings. Ibid., 1932, **11,** 917.

58. Erickson, E. W., and Fahr, G. E.: Effects of lanatoside C upon physiological state of organically diseased hearts before symptoms and signs of heart failure appear. Am. Heart J., 1945, **29,** 384.

59. Ryan, J. M., and Zimmerman, H. A.: Effect of digitalis in patients with enlarged hearts and sinus rhythm but without congestive failure. Am. J. Med., 1950, **8,** 808.

60. Harvey, R. M., Ferrer, M. I., Cathcart, R. T., and Alexander, J. K.: Some effects of digoxin on heart and circulation in man. Digoxin in enlarged hearts not in clinical congestive failure. Circulation, 1951, **4,** 366.

61. Eddleman, E. E., Willis, K., Greve, M., and Heyer, H.: Effect of digitoxin on apparent stroke volume, posteroanterior cardiac diameter and cardiac cycle in normal subjects as studied by electrokymograph. Am. Heart J., 1951, **41,** 161.

62. Cohen, B. M.: Digitalis poisoning and its treatment. New England J. Med., 1952, **246,** 225 and 254.

63. Borison, H. L., and Wang, S. C.: Physiology and pharmacology of vomiting. Pharmacol. Rev., 1953, **5,** 193.

64. Gold, H., Cattell, M., Modell, W., Greiner, T., and Guevara, R.: Local emetic activity of glycosides of digitalis series. J. Pharmacol. & Exper. Therap., 1950, **98,** 337.

65. Enselberg, C. D., Simmons, H. G., and Mintz, A. A.: Effects of potassium upon heart, with special reference to possibility of treatment of toxic arrhythmias due to digitalis. Am. Heart J., 1950, **39,** 713.

“FIGHT CANCER WITH A CHECK-UP—AND A CHECK”*

CALVIN T. KLOPP, M.D.

President, District of Columbia Division, American Cancer Society; Director, George Washington University Cancer Clinic

FIGHT CANCER with a Check-up—and a Check” is the campaign slogan of the American Cancer Society for this year. As such, it will be publicized widely in the press, as well as on radio and television. Patients and potential patients, as well as physicians, will see it in print and hear it quoted again and again. Educational material released by the Cancer Society will emphasize the equal importance of both the physical examination and the contribution. Therefore, as physicians we must be ready to explain to our patients and their friends the importance of both the “check-up and the check.”

The essential program of the American Cancer Society (supported by the check), although expanding, remains unchanged. Education, service and research within the field of cancer are supported. The distribution of each dollar between the local Division and the national organization (60/40) is the same. The guaranteed minimal allocation of national funds to research (25 of each 40 cents) continues. The local Cancer Society program continues as currently publicized. In short, the meaning of the “check” is known to and appreciated by physicians.

The importance of “fighting cancer with a check-up” may not be realized by all physicians. Certainly, physicians agree that most cancers originate as a tiny lesion in a single area and that, if this area is completely removed or destroyed early enough, the cancer patient can be cured. Also, physicians agree that cancer can be diagnosed by adequate and appropriate examination of the patient. Also, they agree that any one of the “seven danger signals” advertised by the Cancer Society may signal the presence of cancer and, therefore, when present in a patient, warrant the physician’s careful examination of at least that part of the patient involved. However, not all physicians realize the completely silent and asymptomatic nature of early cancer which may be present in a person considered, without examination, to be in perfect health. Also, not all physicians realize that the doctor may detect a cancer which the patient has not realized to be present. If the potential patient is to be sold the idea that a check-up is an important method of fighting cancer, all physicians must also be sold so that the established patient demand can be fulfilled.

Any unwillingness on the part of some physicians to carry out a cancer detection check-up must be overcome. Certainly, those doctors practicing certain specialties, who do not have the physical facilities to conduct such an examination, are excused. However, most others are not. Those not having time to devote to such practice might be encouraged to take time as a help to their neighbors. Those not knowing the nature of such an examination or details of some of the portions of it might be encouraged to learn. Those physicians not familiar with the yield of “pathology” found by such a procedure might be educated. Those physicians unfamiliar with the characteristic apparent innocence of early cancer might be instructed. A public unable to get the check-up it has been led to expect might look with disfavor upon a medical profession apparently unwilling or unable to supply a possible lifesaving service.

---

* The statistics contained in the tables were taken from an unpublished paper by Dr. Dorothea B. Chapman which was read before the New England Cancer Society at a meeting sponsored jointly by the George Washington University School of Medicine and the National Cancer Institute in Washington, D.C., December 10, 1955.

A physician's lack of time to carry out cancer detection "check-ups" can be corrected. Lack of time refers to the number of hours available after the physician has cared for sufficient patients to have earned the money necessary to support himself and family and after he has fulfilled his obligations to his home, family, church and country. If the cancer detection "check-up" can become a part of the activity which yields him sufficient profit, then, by doing such he can earn a decent living and there neither can nor will be lack of time. Payment to the physician must be adequate to make such activity reasonably profitable. A lack of physician's time to conduct cancer detection check-ups may only reflect an unwillingness or inability on the part of the patient to pay what the service is worth.

A cancer detection check-up is expensive, but certainly worth the cost. Between 30 and 60 minutes of the doctor's time is required to conduct the actual examination. (What is the value of 1 hour of a good physician's time?) Additional time is required from the nurse who assists him, the secretary who keeps his records, the technician who carries out the required ancillary tests, as well as all the miscellaneous people who maintain what might be called the general "overhead." He must pay for his supplies and equipment. A check-up, like any other good health measure, must be paid for if it is to remain both good and available.

A physician's lack of knowledge of what constitutes a cancer detection check-up is easily corrected. Small, well-illustrated monographs on the subject are available from the American Cancer Society and elsewhere. Such have already been distributed to all District physicians. Cancer detection clinics in the area are willing to instruct any physician in any of the details of special examinations with which he may not be familiar. Medical laboratories willingly supply instructions and materials necessary to help him obtain suitable specimens for analysis. The doctors' lack of knowledge is mostly, again, lack of time and lack of incentive. Patients willing to pay adequately for good cancer detection check-ups can and will make it worth while for the physician to correct his lack of knowledge. The means to correct it are already available.

The yield from such examinations is considerable. Many reports on the findings in large groups of normal individuals have been published; a short summary of results from a local group is included later in this report. The yield in "pathology" discovered should be sufficient to attract even those physicians who are primarily interested in treating sick people. However, the yield to the community in terms of maintaining good health is even more important. Cancer detection check-ups do unearth "pathology" and the following report, while coming from a cancer detection clinic, is submitted to supply data as to what a physician in this area can expect to discover by periodically examining well individuals.

Selection of patients can influence the results obtained from physical examinations. At the George Washington University Cancer Detection Clinic the patients calling for appointments are questioned about any complaints or any symptoms which might possibly be due to a malignant lesion. If there is any doubt that the patient is not well, he is not accepted for the cancer detection clinic. In other words, the patients seen in the Cancer Detection Clinic are carefully selected and are, as far as they know, in perfect health.

The extent of the examination done can also influence results. The extent of the cancer detection examination as done at this and other clinics in the District is as follows: A form with 50 questions, designed to elicit information important to a good history, is sent to the patient and filled out by him before his visit to the clinic. When the patient presents himself, the examiner takes a thorough history and the patient's answers to the above questions are carefully evaluated. A complete physical examination is then performed which includes examination of the oral cavity, pharynx, larynx, neck, breasts, chest, abdomen, pelvis and rectum. A proctoscopy is done on all patients, and also a test for occult blood in the feces. A Papanicolaou smear is taken of the cervix or vagina in all females and of the prostate in males. The laboratory procedures done are: (1) chest X-ray, (2) urinalysis, (3) blood count, including hemoglobin, white blood cell count, differential count, hematocrit and sedimentation rate, and (4) serology. (The method of conducting such an examination is adequately described in a monograph supplied by the American Cancer Society.)

After the cancer detection examination has been completed, and if the patient needs any further work-up (as, for instance, biopsies or more extensive laboratory studies), they are done subsequently by the patient's own private physician. This fact creates certain inadequacies in the value and evaluation of the cancer detection clinic examination, as compared to that done by a physician in his office. Some patients never bother to see their family doctor after examination, even though this has been recommended. They have a false sense of security, since they have been to the cancer detection clinic and have not been told that they have cancer. Also, final evaluation of clinic findings is somewhat difficult; follow-up letters sent to the physicians of all patients who are suspected of having a malignant lesion within 1 to 2 months after the examination are not always answered. Therefore, the information contained in our tables is neither final nor complete, since reports on these patients are still coming in.

The results of the examinations in the Cancer Detection Clinic over the period from September 1, 1953 through August 31, 1955 are shown in the accompanying tables.

Table 1 shows a breakdown of the type of patients seen and the amount of "pathology" found. Three-quarters of the patients are female, predominately white. The number of colored patients seen is very small (not even one-tenth of all patients), which is surprising when compared with the high incidence of Negroes in the population of the District of Columbia (43 per cent of the total populace).[1] The explanation could be that Negroes may not be as concerned about their health or are as "cancer-conscious," or that they cannot afford as easily to pay the required fee. Nearly one-fifth of our patients have been to the Clinic for at least 1 prior examination. Yearly examinations are considered very desirable, since with repeated examinations the possibility of finding an asymptomatic malignant neoplasm increases as the patient grows older. The type of "pathology" found represents clinical impression only. It is surprising, however, that only about one-sixth of all these patients who believed themselves to be in perfect health, and who stated that they did not have any complaints, were found to have no apparent abnormality.

TABLE 1

*Type of Patients and "Pathology" Found**

A. Total number of patients seen: 2,321

	Females		Males	
	Number	Per cent	Number	Per cent
White	1,613	69.5	505	21.8
Colored	164	7.0	34	1.5
Yellow	5	0.2	0	
TOTAL	1,782	76.7	539	23.3

B. Total number of repeat visits: 455 (19.6%)

C. Type of pathology found (all patients)

	Number	Per cent
1. No "pathology"	374	16.1
2. "Pathology"	1947	83.9
(a) Noncancerous	1417	61.0
(b) Probably benign but could be cancerous	319	13.8
(c) Probably cancerous but could be benign	211	9.1

* September 1, 1953–August 31, 1955.

Table 2 lists lesions which were considered serious. Nearly 14 per cent of all patients had 1 or more such lesions. Some of these, as for instance, leukoplakia in the oral cavity, or enlarging and irritated nevi or rectal polyps, could be beginning cancer; however, on clinical examination, they did not look suspicious.

TABLE 2

*Number of Potentially Serious Lesions Found: 350**

A. Skin		147
1. Junction nevi	106	
2. Senile keratosis	16	
3. Irritated or enlarging nevi	25	
B. Oral Cavity		41
1. Pigmented lesion of mouth and lip	9	
2. Leukoplakia	32	
C. Polyps		161
1. Cervical	57	
2. Rectal	103	
3. Nasal	1	
D. Cervix (leukoplakia)		1

* September 1, 1953–August 31, 1955.

TABLE 3

*Suspected Malignant Lesions, 220 Locations**

A. Laboratory findings		54
1. Chest X-ray	29	
2. Cytology	24	
3. CBC	1	
B. Skin		28
1. Basal cell cancer	19	
2. Melanoma	8	
3. Bowen's disease	1	
C. Breast		24
D. GYN tract		31
1. Fundus (history and physical examination)	25	
2. Cervix	6	
E. GU tract (prostate, hematuria, etc.)		5
F. Head and Neck		40
1. Thyroid	32	
2. Other (oral cavity, submaxillary glands, etc.)	8	
G. Lymph system		4
H. GI tract		28
1. History and physical examination	18	
2. Rectal lesion	10	
I. Miscellaneous (skeletal and CNS)		2
J. Previously treated cancers with suspicion of new lesions		4

* September 1, 1953–August 31, 1955.

In 211 patients, 9.1 per cent of the total, possible malignant lesions were suspected because of history, physical or laboratory findings, as seen in table 3.

The follow-up information which has been received from the patients' physicians is summarized in table 4. Of those on whom information is available, it will be noted that 8 patients neglected to obtain follow-up care, 4 of them apparently moving from this locality. No further studies were done on 5 patients with the following abnormalities: breast nodule (1), thyroid nodule (2), and abnormal chest X-ray films (2).

TABLE 4

*Follow-up on 211 Patients with Suspicion of Malignant Disease**

A. No information available		122	(57.8%)
B. Follow-up information available		89	(42.2%)
Type of "pathology" reported:			
1. Noncancerous	53		
2. Precancerous	3		
3. Questionable carcinoma (By clinical impression, X-ray or questionable pathologic diagnosis)	3		
4. Proven carcinoma	10		
5. Under observation	7		
6. Nothing done	13		
(a) By patient	8		
(b) By doctor	5		

* September 1, 1953–August 31, 1955.

The discovered cancers are listed in table 5. All proven carcinomas were found in white patients and had histologic proof of the diagnosis. The largest number (3) of carcinomas discovered in any one organ were rectal carcinomas. Of these, 2 were very early and the other was a focal area of in situ cancer in a polyp. (Of these, the complaint of rectal bleeding was mentioned by only 1 patient, who had slight bleeding from hemorrhoids when constipated.) The value and importance of routine proctoscopic examinations should be stressed, especially since the step from benign rectal polyp to carcinoma seems to be almost imperceptible,[2] and removal of rectal polyps in prevention of cancer or discovery of early cancer is desirable.

TABLE 5

*Proven Malignant Lesions**

A. Malignant disease suspected in 211 (9.1%) of all patients seen.

B. Malignant disease proven by "pathology" in 10 (11.2%) of replies to inquiry regarding the above patients.

C. Malignant disease proven by "pathology" in 13 (0.56%) of all patients seen (3 of these discovered in patients in whom further study was recommended and done following CDC examination). Type of malignant lesion discovered:

1. Rectal carcinoma		5
2. Head and Neck		3
(a) Palate	1	
(b) Adenocystic basal cell cancer of skin of neck	1	
(c) Metastasis to neck	1	
3. GYN tract		2
(a) Cervix	1	
(b) Fundus	1	
4. Breast		2
5. Lymphoma		1

* September 1, 1953–August 31, 1955.

The circumstances of the discovery of the 1 adenocarcinoma of the fundus uteri is of interest. This patient came to the Clinic for a routine check-up. When the history of abnormal bleeding was obtained, the patient disagreed, stating that she felt that it was normal since she had had her "monthly" menstrual period in 1952 and had been menstruating approximately every 6 months since. She became annoyed when a D & C was suggested, and left the Clinic very dissatisfied. However, 2 months later we received this follow-up information from her physician: "D & C showed adenocarcinoma of the fundus. This was a well-defined type, and no crater or irregularity was noted to the curette. Six days later a radical total abdominal hysterectomy was done and the microscopic diagnosis was 'small amount of residual adenocarcinoma in several areas of endometrium. . . .' "

The incidence of malignant lesions found in another cancer detection examination has been reported as 1 for every 115 examinations performed, which is approximately 0.87 per cent (Hitchcock and Sullivan[3]). Yield in this local Clinic is somewhat lower, 0.56 per cent. However, we have not received follow-up information on all our patients (not even on all patients with suspected carcinoma), and therefore our statistics are incomplete.

The value of detection of early cancer has been demonstrated in the literature. Best results are obtained if the lesion is found before symptoms appear. For instance, statistics from Memorial Hospital in New York show that primary lesions in the oral cavity less than 2 cm. in diameter have almost twice the 5-year cure rate as do larger lesions.[4] The asymptomatic lung cancer, discovered by X-ray examination, has a higher rate of resectability and greater potential curability than symptomatic cancer.[5] A 93 per cent survival for a group of asymptomatic patients with cancer of the colon is reported[3] as compared to 36 per cent survival in the group of symptomatic patients. The value of regular, yearly examinations is substantiated by the fact that after the first examination 55 per cent of all cancers subsequently found were asymptomatic. Probably the over-all 5-year survival rate could be raised considerably and possibly more than doubled if the general population would participate in a yearly cancer detection examination. To accomplish this, physicians must educate the public that it is necessary to invest time and money regularly each year for a complete physical examination which, of course, could reveal not only silent cancer, but also any other noncancerous lesion and so-called precancerous lesions, which could be treated before they developed into cancer.

The George Washington University Cancer Detection Clinic is a teaching institution. As such it supplies service to those who desire examination at a low charge, which is less than that for which the practicing physician can supply the same service. It cannot and does not attempt to fill any but the tiniest part of the community's needs for examining facilities. Other cancer detection clinics at Georgetown University Hospital and Garfield Memorial Hospital are also

(*Continued on page 238*)

PREVENTIVE MEASURES IN ALLERGIC DISEASES*

ALVIN SELTZER, M.D.

Clinical Instructor in Medicine, George Washington University School of Medicine

WITH ALLERGIC reactions and allergic persons definite factors in almost every doctor's practice, it is important to know about some simple measures that can reduce the incidence of allergic diseases. I have attempted to summarize some of these measures that any doctor can apply and the knowledge of which should be available to all highly allergic families. First of all, we should realize the importance of hereditary factors in allergic diseases. With 1 allergic parent the incidence of allergic children is about 25 to 35 per cent, with 2 allergic parents the incidence is about 75 per cent. The children merely inherit the tendency to have allergic diseases, but not necessarily the particular type or causative factors of the parent's allergies. Our conclusions from this are obvious. In the first place, allergic patients should be aware of these hereditary factors, so that perhaps a better selection of their mates would reduce the rising incidence of allergic diseases. Secondly, and most important to us as physicians, we should be aware of these allergic families, and be more cautious and careful of our medications and treatment of these people.

Prenatal Preventive Measures

In allergic families, prevention of allergies should start with prenatal preventive measures. We should avoid, as much as possible, the exposure of the unborn infant to potent allergens. This means reducing the amounts of trouble-making allergens in the mother's diet. We know that proteins can pass through the normal placenta and sensitize the baby even before birth.[1] Thus, I suggest that pregnant women of allergic family backgrounds should avoid large and frequent amounts of potent allergens like chocolate, eggs, nuts, fish, pork, raw milk, etc.

Preventive Measures in Infancy

Next, chronologically, we go on to preventive measures in infant feeding. The best food for the potential allergic infant is still the mother's milk, and every attempt should be made to encourage breast-feeding. This may require urging from the obstetrician and extra work on the part of the pediatrician, but the figures prove our point—less breast-fed babies become allergic than bottle-fed babies. The mother with this knowledge will be coöperative in most instances.

In allergic families, if the baby must be bottle-fed, one should be aware of the statistics that about 1 out of every 15 of these babies is allergic to cow's milk, and we should have some suspicion of any milk formula in allergic families. In fact, there is one school of pediatric allergists who routinely start all babies of allergic families on a soybean formula; their statistics show a lower incidence of allergic children on this routine.[2]

As the baby grows older and new foods are added, contrary to all the recent news headlines about bacon and eggs at 9 weeks of age, I suggest we add the new foods slowly, 1 at a time, and watch particularly for food reactors and eliminate them. The problem is not merely that of food allergy alone, since many of these food allergies are outgrown, but rather that 1 allergic reactor lowers the tolerance to other allergens and may set up a chain of other allergic reactions, like the frequently seen problem of the baby with multiple food allergies who just "outgrows" them, only to be followed by an allergic rhinitis which he again "outgrows," and finally is left with a life-long bronchial asthma.

---

* Presented in part before a meeting of the Jacobi Medical Society in Washington, D.C., November 21, 1955.

Reduction of Allergic Inhalants as a Preventive

Much can be done to reduce the incidence of allergic disease in susceptible families by sensible reduction of undue exposure to potent trouble-makers.

House dust. This is a well known and frequent causative factor in allergic diseases, and sensible methods should be used to avoid unnecessary exposure to this in allergic families by such means as proper bedding and furniture, better house-cleaning tools, and perhaps even better heating units.

Pets. These can be a factor in allergic diseases, and since the incidence of allergic reactions to dogs, cats, horses and other pets is fairly high in allergic families, pets should be avoided in these families.

Vacations and trips. It is surprising the number of individuals who develop their first allergic symptoms during a vacation or a long trip. The reason is quite obvious, if one realizes that on some trips one can increase the concentration of allergy-producing factors a thousandfold. It is suggested, therefore, that allergic families plan their trips and vacations during certain times when, and to such places where there are minimal allergic factors. The month of July is the best time for vacations, since in most cases both the grass pollen season and the ragweed season are avoided. One should choose for a vacation either the shore or the mountains, and should avoid particularly a vacation on a farm, with its high concentration of multiple allergens.

Undue exposure to pollens. This can be a potent factor in initiating allergies in the susceptible individual, as the military services learned in the last War by the experience of the high incidence of initial allergy attacks suffered by the men who were training in the Midwestern fields during the fall pollen season. Thus, small children as well as adults from allergic families should avoid excessive playing or working in the grass and weeds during the pollen season.

Preventive Measures in the Use of Medications

All members of allergic families should be strongly urged to get tetanus toxoid, in order to avoid the need of exposure to antitoxin.

In general it is better to use oral medications than injectables in allergic families. Injectable penicillin, vitamins, liver, and hormones, etc. are frequent causes of allergic reactions, and in most cases these could be replaced by oral products. The use of injectable antihistaminics which can be mixed with these medications has been suggested as a method of reducing these allergic reactions.[3, 4] Although there may be some theoretical advantages to this procedure, it gives us a false sense of security, and from my own experience does not appreciably reduce the incidence of these allergic reactions. Therefore, in allergic families, one should think twice before he gives them an injection of anything and if possible should switch to an oral form of the medication.

Occupations as a Factor in Allergies

There are certain occupations which have a particularly high incidence of allergic irritants, and allergic families should be aware of this and if possible guide their members away from such occupations. I have particular reference to such jobs as baker, upholsterer, florist, furrier, farmer, and painter.

Climate as a Factor in Allergies

Climate as a preventive factor in allergic diseases is a subject about which there is much misunderstanding.[5, 6] Many allergic families, on their own or often on the urging of their physician, have made drastic climatic changes, without any real understanding of the problem. Our best-known "allergy-free" climates have many allergy specialists busy with patients we have sent there. It is true that factors such as frequent barometric changes, high humidity, considerable industrial irritants, and high concentration of certain pollens and molds are more apt to cause allergic symptoms, but to send a family without knowledge of what they are attempting to avoid, and to make them give up financial and social connections and seek health and happiness in a strange area more often merely add to their problems. It is important that a careful evaluation of the problem should precede any recommendations to change climate for allergic diseases.

SURGERY IN ALLERGIC FAMILIES

Surgery can be a "double-edged sword," both literally and figuratively, in allergic states. On the one hand, properly indicated surgery can be a factor in prevention of allergies, as, for example, the removal of foci of infection in chronic urticarias or the correction of a chronic infectious sinusitis in an asthmatic, etc. On the other hand, poorly timed surgery can lead to the actual initiation of allergic symptoms. Elective ear, nose and throat surgical procedures should be postponed in allergic families during high pollen seasons, or in the presence of mild allergic symptoms. Surgery done at these times has been followed by the onset of asthma or hay fever too often to be mere chance. When we realize that the open surgical field allows for more rapid absorption of allergens one can understand the problem.

OTHER PREVENTIVE MEASURES

The early treatment of allergies can be a preventive measure, since adequate treatment of allergies, in the early states, leads to more satisfactory results and simpler treatment. By early treatment we avoid the complications and the chronic, irreversible changes that occur with long-standing allergic diseases. Allergies should be treated as soon as the symptoms have definitely been established, and as soon as the patient or the parent is sufficiently convinced of their importance in order that proper treatment will be followed.

Good general medical care can be preventive. Often an allergy will arise after an acute infection, in a debilitating illness, or during a severe emotional stress. Thus, prompt and judicious medical care during the ailments of a potential allergic individual may help reduce some of the chances of his becoming an actual allergic individual.

Finally, I would like to leave you with a little analogy that I have found useful in understanding the confusion which exists today in the field of allergic disease. How can we explain the confusion which arises when one doctor treats allergic diseases by psychiatric methods, when another doctor explains allergies on the basis of antigens and antibodies, and when still another uses the infectious or hormonal approach, etc., all claiming good results? I like to picture allergic diseases like the elephant in the story of the three blind men and the elephant. One blind man feels the elephant's trunk and says, "The elephant is like a snake"; the other blind man feels his legs and says, "The elephant is like a tree"; and finally, the third blind one feels his side and says, "He is like a wall." They were all correct, but they were merely describing a small part of a greater unit. At this stage we are still somewhat like many blind men, describing a part of a greater unit, which we call allergic diseases. In the proper evaluation of allergic diseases we must evaluate all aspects of the patient—the infectious factors, the antigenic factors, the psychologic factors, the general medical status, etc., in order to do the most good for the patient. Let us treat the patient as a complete unit rather than as a nose problem, a skin problem, or a chest problem, and we shall have greater success with this interesting puzzle which we call allergic diseases.

2025 Eye Street, N.W.
Washington 6, D.C.

(*Continued on page 238*)

ARE ORGANISMAL AGING AND AGING DEATH NECESSARILY THE RESULT OF DEATH OF VITAL CELLS IN THE ORGANISM?

(A Cybernetic Theory of Aging)

JOSEPH W. STILL, M.D.

Assistant Professor of Physiology, George Washington University School of Medicine

SINCE THE FIRST STEP in developing a new theory is to question the old, it is always helpful to be able to point to a concise statement of the old one. Virchow's concepts of the cellular history of disease have won such universal acceptance in pathology generally that they have been uncritically accepted as the foundation of most theories of organismal aging and often are not fully stated. However, the following statement by Heilbrunn,[1] which I shall label the Cell Death Theory of Aging (C.D.T.A.), presents this view clearly and concisely: "Both in the case of age and of death, it is possible to consider two aspects of the subject (senescence). An entire organism may age and die, but this need not involve all the cells of the organism. It is therefore necessary to discuss on the one hand, the age and death of entire animals and plants, and on the other hand, the age and death of individual cells. Obviously the two phenomena are related, for *the death of an animal is certainly due to the death of its component cells, and the death of individual cells which are important in the vital machinery eventually cause death of all the cells of the organism* [my emphasis]. In the case of protozoa or other single-celled organisms there is, of course, no distinction between death of the cell and death of the individual."

In this paper I shall present evidence which certainly throws doubt on the critical italicized portion of the above statement. Though at the present time the statement cannot be disproved, the mere questioning of it may prove useful to research on aging.

At the outset it is necessary to emphasize that I accept Heilbrunn's distinction between "the age and death of entire animals—and on the other hand the age and death of individual cells." It is only the aging and death of entire animals which is of serious concern to human beings, and this paper is concerned only with it.

In order to avoid confusion it will be well so far as possible to discuss the question of aging and death separately. Consequently, I will first ask and attempt to answer the question, "Can death occur in the absence of dead cells?" It is unnecessary to mention, except for completeness, that the apparent continuous death and replacement of nonvital cells in blood, skin, etc., will be ignored in this argument.

Since the most vital centers of the body (with the possible exception of the heart) are in the brain, there is strong reason to turn attention to the nervous system as one area where disorganization (death) might be induced without the preliminary killing of cells.

Every increase in our knowledge of the physiology of higher organisms emphasizes the importance of the nervous-endocrine control system as the mechanism whereby the billions of cells of our bodies are maintained in the coöperative organized relationship which constitutes a whole living individual. The nervous control, via the hypothalamus, of the endocrine system makes it clear that the nervous-endocrine system is in truth a single closely coördinated control (or organizing) system.

Because it is so relatively easy to disorganize (kill) an animal by disrupting this organizing system at many points, it is tempting to wonder if in fact all organismal death could be due to disruption of this system. When we reflect a bit on the classified "Causes of Death"[2] we are led to ask, "Was it the coronary thrombosis that killed the patient or was it the resulting cerebral anoxia?" And we feel we have been asked a "chicken and egg" question. But when we ask, "Was it the nephritis and resultant uremia that killed the patient or was it the nervous toxemia?" we begin to see that the question has value. For we know today that many patients with nephritis who would formerly have died are now being saved with the artificial kidney. Their nervous systems are being protected from the damage of uremia while their damaged kidney cells heal or are replaced. We therefore wonder whether death from nephritis is due to dead kidney cells or whether it is due to toxic nerve cells. The evidence from our experience with the artificial kidney strongly supports the notion that it is really the toxic nerve cells which cause death. Apparently the artificial kidney maintains the "internal milieu" for sufficient time for the damaged kidney cells to recover or be replaced.

A further speculation of this type which seems pertinent is to ask, "What vital cells die at the instant of death and thereby kill the organism?" It seems highly probable that in most deaths there are few if any vital cells dead at the moment which we record as clinical death. It is quite likely that given a suitable culture medium we should be able to grow cells from all body tissues, including the nervous system, if removed within minutes after clinical death.

The above arguments, which most medical men and biologists would tend to accept, nevertheless seem a little on the "speculative" side since they cannot be supported with much positive evidence. So we shall approach the matter from another viewpoint, namely, that of cybernetics.

The development of this area of science has brought to our attention and emphasized a number of features in the control of machines which undoubtedly hold true in living organisms also. Some of the features to which I wish to draw attention are these:

1. In a complex organism being controlled by feedbacks, there are optimum relationships between the transmission distances and transmission rates of the messages ordering actions of the organism and the "feedback" messages monitoring the action.

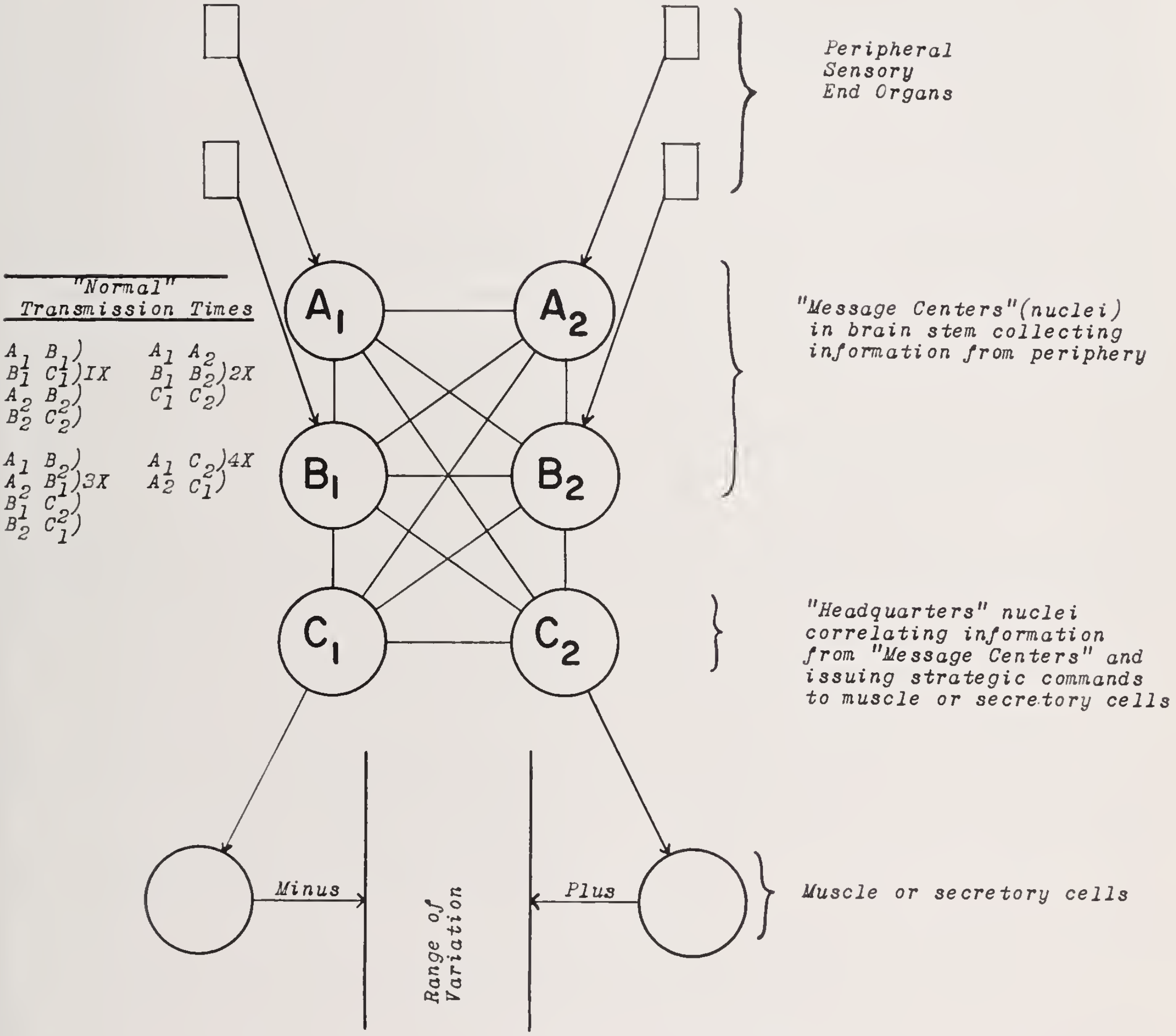
2. In a complex message system the most vital and most vulnerable point is the control panel.

3. A machine whose operations are controlled by "feedbacks" from the periphery can be thrown into wild uncontrolled oscillation either by excess or deficit of "feedback" signals.

Those interested in the full development of these principles should consult Wiener's "Cybernetics."[3] I shall merely try here to use them to answer our question, "Can death occur in the absence of dead cells?" by discussing a few kinds of death which are undoubtedly the result of cybernetic (control) failure.

The first kind of death which I shall discuss is the acute death by electrocution. There is no question here that the high voltage impulses passing in chaotic confusion over every nerve tract disorganize the nervous control system and thereby cause death.[4] The fact that such individuals are frequently revived by artificial respiration, sometimes aided by cardiac massage, seems adequate proof that the electric shock per se does not destroy the cells of the vital nuclei in the thalamus and brain stem. They must simply be thrown into such chaotic confusion that only external artificial restoration of bodily functions can start the machine operating again.

Another possibility is exemplified by a disease such as Guillain-Barré syndrome. Here, some agent, possibly a virus, causes reversible damage to nerve cells. When the cells attacked are those in the anterior horn of the spinal cord (the usual point of attack) there is temporary skeletal muscle paralysis and eventual recovery. The cells are apparently only temporarily damaged. If, however, the agent affects vital cells in the brain stem, death frequently results.[4] Does this indiate that in the latter case cells were killed and not in the former? It seems a fair guess that these brain stem cells would also, given sufficient time, recover as do those of the anterior horns. Of course, their temporary nonfunction disrupts the organization and then, of course, irreversible damage and death of the organism rapidly ensue. We may before too long be able to test such a hypothesis by means of tissue culture technics. Certainly we already know that cells can be severely damaged and still recover. If this hypothesis is correct, we may hope that in another few years we shall be able to save such patients by means of long continuous cross-transfusion with an immune donor who would carry on the vital functions for a sick individual while his own vital cells were repairing them-



Peripheral Sensory End Organs
"Normal" Transmission Times
A_1 B_1)
B_1 C_1)1X
A_2 B_2)
B_2 C_2)
A_1 A_2
B_1 B_2)2X
C_1 C_2)
A_1 B_2)
A_2 B_1)3X
B_1 C_2)
B_2 C_1)
A_1 C_2)4X
A_2 C_1)
A_1
A_2
B_1
B_2
C_1
C_2
"Message Centers"(nuclei) in brain stem collecting information from periphery
"Headquarters" nuclei correlating information from "Message Centers" and issuing strategic commands to muscle or secretory cells
Minus
Range of Variation
Plus
Muscle or secretory cells

FIG. 1. Schematic presentation of main organizational features of nervous-endocrine control system.

selves in essentially the same way that the artificial kidney now performs for the individual with temporarily damaged kidneys.

Another possibility by which an individual could be disorganized without the actual destruction of vital cells can be most easily presented by means of an ideograph (fig. 1), which schematically presents the main organizational features of our nervous-endocrine control system as we have been discussing it.

In a control system of the type diagrammed in figure 1, which contains a headquarters where reports on several different kinds of events are received and correlated with each other to form the basis for issuing vital "strategic commands" (based on highly complex and as yet poorly understood rules of priority) to muscles and secretory cells, the matter of timing becomes of transcendent importance. For purposes of illustration, a table of "normal" transmission time values has been included in figure 1. These illustrative values are intended to indicate the units of time required to transmit a message from one center to another.

If we imagine some biologic event which increases the transmission time A_1 B_1 (for example) from 1X to 1.5X and which event does not affect the other values, we can readily see how this simple time change can disrupt the correlation activity of the headquarters. Though I know of no actual disease to offer as an example of this condition (unless aging itself is such a disease), it is not difficult to believe that one may exist which would increase the transmission time A_1 B_1 without actually stopping transmission, as in the Guillain-Barré syndrome illustration above, and without changing other transmission times.

Similarly, since the distances A_1 B_1, A_1 A_2, etc. are permanently fixed once growth is completed, one would expect that some one value for X would be optimal for the "ideal" performance of the mature control center. Any progressive decrease or increase in the value of X would eventually reach a critical level beyond which further change would destroy the function of the center. A switchboard which ceases to complete calls when overloaded, as in the electrocution illustration, is an example of one extreme. Conversely, a message center where messages come in too slowly to keep the operator awake would likewise destroy the center as a functional entity.

Since most studies of physiologic changes with aging show increased nervous and endocrine reaction times, it is inviting to associate these increased reaction times with increased transmission times.

This increased transmission time as reflected in diminished reactivity may be illustrated by an ideograph (fig. 2) which summarizes the main aspect of the age changes which occur in all physiologic functions.

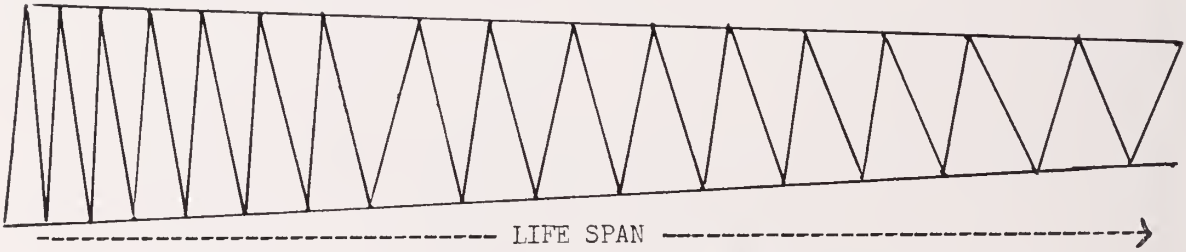


FIG. 2. Changes in amplitude and speed of a homeostatic change (temperature, for example) with age.

Now, if aging deaths are due to an increased transmission time in the control system, we are led back to a consideration of what changes occur in these control cells which cause these changes in transmission time. At first it may seem that this theory has simply led us back to the same point from which we started, but there is a difference. This theory narrows our interest, so far as aging is concerned, to the central control cells of the nervous-endocrine system. If correct, this could be of great value in planning further research. Secondly, this way of looking at the problem seems to make a clearer distinction between cellular death and aging on the one hand and organismal death and aging on the other than does the C.D.T.A.

In the paragraphs just above I have discussed the possibility that a change in transmission time could disrupt a headquarters composed of cells even though no individual cells were destroyed. Though this possibility seems very likely to occur at least in certain diseases, other evidence suggests that as aging actually occurs in nature there is a real loss of functional brain cells. Rockstein[5] has carefully measured this decline in aging honey bees. The studies of Andrew and Cardwell[6] with human material also support the notion that there is a general decline in the number of functional nerve cells with advancing age.

A recent work which shows that monkeys apparently have a normal excess of anterior horn cells of about 35 per cent seems to indicate that the normal youthful spinal nervous system has a large factor of redundancy[7] which, as the cyberneticists have shown, decreases the risk of message transmission failure. If we assume that the rest of the youthful nervous system possesses a similar degree of redundancy, and if we accept the belief that the central nervous system suffers a loss of functional cells with advancing age, we have an additional factor which must be related to aging.

It appears that the aging message system not only transmits messages more slowly but that there is probably less redundancy in the system as well. Therefore, in times of crisis, message failure and hence coördination failure may occur more easily than in a youthful animal.

This cybernetic description of the aging phenomenon brings the problem of aging down to a level where we may approach it as a disease. These are some of the more important questions that flow from this view:

1. Is the decline in number of brain cells directly related to the passage of time, or is it due to recurrent "little diseases" or "little strokes" which gradually reduce the redundancy of the nervous system?

2. Can the decline in number of central nervous system cells be due to an initial loss of peripheral afferent cells? Thus the loss of cells of the central nervous system would be really a sort of disuse atrophy resulting from the fact that certain peripheral cells having been destroyed, the central nervous system receptors of those cells are no longer stimulated, and so die.

3. Does a "headquarters" system such as I have described need a balanced pool of "intelligence"; that is, does the completely blind, the totally deaf, the anosmic individual, or the amputee, in whom of course whole areas of "intelligence" are impossible, ever live to an advanced age?

4. What changes in cell physiology could account for the increased transmission time of nerve impulses?

5. Could increased transmission time be the result of death of functional cells with replacement by glial cells which actually remain in the transmission pathway but which, possessing a slower transmission rate, cause the slower transmission rates characteristic of aging?

6. Is there a physiologic slowing with age of transmission rates in all nervous cells?

7. What transmission rates are optimum from the standpoint of the control of the "internal milieu"?

In our present state of ignorance, there is probably not much we can do about cellular age changes other than to study them more. But we do have fairly good technics for studying the adequacy of function of our nervous-endocrine control system. We also have at least a few forms of therapy by which we can intervene in this system in the hope of adjusting imbalances which may develop in the control system. A good deal of our current knowledge and practice readily fits the concept presented above. It is hoped that this Control (Cybernetic) Theory of Aging will help us to direct more critically our studies of aging.

(*Continued on page 238*)

CONGENITAL ECTODERMAL DEFECT WITH AMASTIA

RAYMOND ALLEN OSBOURN, M.D.

Clinical Associate Professor of Dermatology and Syphilology, Georgetown University School of Medicine

IN 1952 I reported a case of congenital ectodermal defect with bilateral absence of the nipples.[1] At that time it was the fifth such case that had been recorded in the literature, the first having been reported by Hutchinson[2] in 1886. Recently I have observed another patient who has this abnormality.

All of the 5 reported cases showed similar clinical features in that they exhibited dry, scaly skin, prominent frontal bossing, high and wide supra-orbital ridges, depressed nasal bridge, and thick and protruding lips, with teeth absent or deficient but usually with normal nails. The present case again exhibits all of these features.

REPORT OF CASE

A 15-month-old white male was seen first in February, 1954. He was a well-developed, well-nourished child of apparent normal temper and behavior. His skin was very dry, thin, wrinkled and extremely light. In many places, particularly on the arms and knees, he presented an eczematous eruption with crusting and some oozing. His hair was fine and devoid of pigment and seemed to be chiefly of the lanugo type (figure 1).

He showed mild frontal bossing and slight depression of his nasal bridge, and his lips showed mild eversion. There were no eyebrows or eyelashes, and his ears were rather prominent. His chest showed no evidence of breast tissue or nipples. His extremities and nails were well-formed.

The child had never been noted to evidence any sweating, and exposure to heat failed to reveal any evidence of sweating at the time of examination. In September, 1955 he showed only 4 malformed incisor teeth.

The child's mother had inquired into both maternal and paternal ancestors but failed to find any suggestion of congenital defects. The patient's older brother had ectodermal defect with lanugo hair, markedly deficient teeth, which had been replaced by full dentures, and dry skin with very little evidence of pigment. However, this child did have normal-appearing nipples. An older sister likewise exhibited some features of an ectodermal defect, having fine hair, dry scaly skin, and very little skin pigmentation, but she also had normal-appearing nipples. The mother does have a deficiency of 3 teeth but no other evidences of any ectodermal defect.

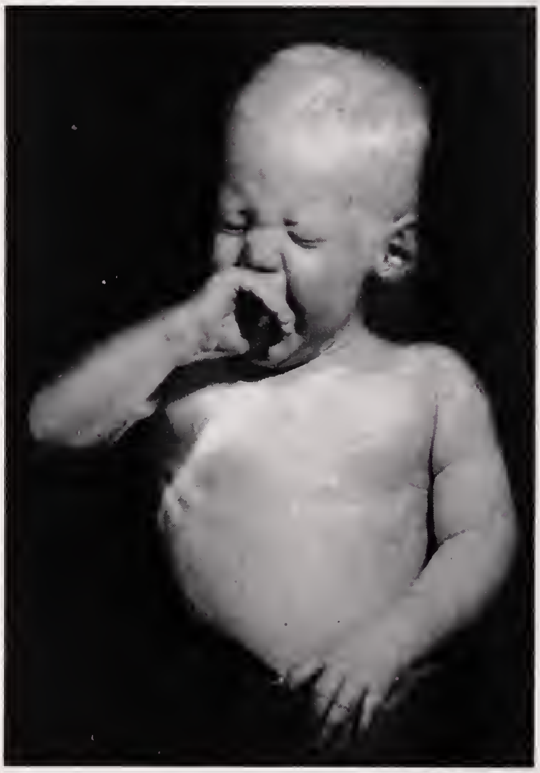


FIG. 1. Note absence of nipples, partial alopecia with lanugo hair, and saddlenose.

COMMENT

This patient represents the sixth case of congenital ectodermal defect with amastia to be reported in any detail. Kiskadden et al[3] in 1949, in a discussion of the theories of congenital defects, mentioned a case of congenital bilateral absence of the nipples, combined with bilateral "lobster claw" of the hands and feet and cleft palate. However, they did not give further details of the case and they did not mention the condition of the child's skin, hair, nails or teeth.

TABLE 1

Chief Features of Reported Cases of Ectodermal Defect with Amastia

Case	Author	Year	Sex	Hair	Teeth	Skin	Nose	Sweating	Nails
1	Hutchinson[2]	1886	M	Alopecia except lanugo hair	"Tolerably normal"	Thin, wrinkled, "old-mannish"	Not described	Not stated	Spoon-shaped
2	Tendlau[4]	1902	M	Partial alopecia; beard, axilla, and pubis normal	4 in upper jaw; none in lower	Dry, thin, and scaly	Saddle; atrophic mucous membrane	Absent	Normal
3	Kaalund-Jorgensen[5]	1941	M	Alopecia except lanugo hair and eyelashes	13; some deformed	Thin, fine and dry	Saddle; atrophic mucous membrane	Absent	Normal
4	Upshaw and Montgomery[6]	1949	M	Partial alopecia; beard normal	None	Keratoderma of palms and soles	Saddle; atrophic mucous membrane	Absent	Normal
5	Osbourn[1]	1952	M	Alopecia except lanugo hair	None	Thin, dry and scaly	Saddle	Absent	Normal
6	Osbourn	1955	M	Partial alopecia, lanugo hair	4 abnormal incisors	Thin, dry, scaly and eczematous	Slight saddle	Absent	Normal

A reference to the features listed in table 1 shows that practically all of these patients presented the following similar characteristics:

Skin: Dry, thin, and wrinkled
Hair: Chiefly of the lanugo type
Face: Saddlenose with prominent supra-orbital ridges
Teeth: Markedly deficient or absent
Nipples: Absent bilaterally
Sweating: Absent
Nails: Essentially normal

The 5 cases previously reported showed all of these attributes, but only in Hutchinson's case were the nails abnormal, and in his case report he failed to describe the child's face or to record the presence or absence of sweating. In consequence, I believe these patients are characteristic enough to constitute a congenital deprivation entity occurring in male children, and I prefer the name, "congenital ectodermal defect with amastia," for this condition.

In my previous report[1] I discussed the practical aspects of life for a patient with this congenital deprivation. I suggested keeping the skin lubricated with bland ointments, abstaining from the use of soap, and avoiding overheating of the body. In view of more recent experience with these patients, prompt treatment of even mild skin infections appears to be important, with particular care to avoid any drug likely to be sensitizing. Furthermore, if possible, these patients should avoid any occupation or environment that entails a risk of skin trauma or infection. Likewise, they should avoid irritant soaps or detergents and known sensitizing plants, sprays or chemicals.

I have stressed the importance of early dentures in such patients, and for the patient reported in 1952 full dentures have been made. This child was recently shown at a dental convention in Washington, D.C., and those who saw him commented that the teeth were quite serviceable.

(*Continued on page 238*)

President's Page

COMMITTEES AT WORK

These lines were dictated in mid-March. At that time my term of office was well past its halfway mark. In fact, less than four months of my administration lie ahead of me.

To say that the months have passed rapidly is an understatement. They have been extremely busy ones, filled with a great deal of organization activity. Like my predecessors I have found the presidency a rich, if at times trying, experience. However, it is one I would not have missed, if for no other reason than the privilege of observing at first-hand how dedicated many physicians are to our Medical Society.

I have made it a point during the year to attend at least one meeting of each active committee. I say "active" because a committee's activities vary from year to year. Some years there is little to do, during others the committee is all but dormant, and then of course there are the busy years. These can be very demanding, often requiring real sacrifices on the part of the chairman, in particular.

It is not possible to go into details of committee activities. Nevertheless, I can tell you that watching them work has been an eye-opener to me. I had, of course, served on several committees before being elected President but had never had a bird's-eye-view of the organization as a whole in operation.

To those whom I have observed in action and others who have been busy with Society affairs, I wish to extend my deep appreciation. Without them the wheels of the Society would certainly come to a standstill. If you happen to be a member of a committee that is not very active because there have been no immediate problems to deal with, the important thing is that you have stood ready to respond if need be. To you I am also deeply grateful.

I can honestly say that watching committees at work will be one of the happy recollections of the year that I served as President.

W. Ross Morris

Editorials

CONSTRUCTIVE MEDICINE: A DEFINITION

Constructive medicine has as its objective the construction of greater health in apparently well persons. Health is never perfect and is thus always amenable to improvement. Treatment of the sick is an attempt to reconstruct health after it has been damaged. Constructive medicine individually applied to adults offers much more than is generally realized.

Therapeutics, the science and art of treatment, is the primary and continuous concern of every practicing physician. Today doctors are immensely better equipped to treat disease than ever before. Refined diagnostic methods permit of greater precision in identification of disease states; potent new weapons are being added to medicine's armamentarium at a bewildering rate. American medicine, along with other American technologies based upon science, is so proud of its "know how" that in its conceit and eagerness it has largely ignored the vital question of "know why." Mankind's history reveals how sadly frequent is the acquisition of learning how to act far ahead of the attainment of judgment as to when, where, and why to act.

The usual classification of therapy is based upon technics involved, such as: medicinal therapy, surgical therapy, psychotherapy, physical therapy, and nutritional therapy. This classification parallels the major divisions of medical specialization. It is founded on "how." From the viewpoint of "why" we can classify therapeutics by its objectives. The three conventional, well-known, and accepted objectives of therapy are prevention or prophylaxis, cure, and palliation. Today we must add the therapeutic objective of control, which is more than palliation, yet less than cure. The importance of control as a therapeutic objective has been immensely augmented by the rapidly rising frequency of the chronic progressive disorders characteristic of later years. Today, with 85 per cent of deaths from all causes being consequent to the progression of chronic illness, cure, in the conventional sense, is, and will continue to be, the exception. The objective of control therapy in chronic progressive illness is to increase so far as possible the spread between disease, disability, and death. Control is the type of therapy applied in diabetes mellitus, hypertensive arterial disease, arteriosclerosis, pernicious anemia, presbyopia, gout, and other chronic disorders. The controlled diabetic still has diabetes, but he is physiologically competent.

All these four objectives—prevention, cure, palliation, and control—are focused upon disease. What about construction of greater health? It has received scant attention in all areas of medical science and practice, with the notable exception of pediatrics. Clinical medicine has been too busy with minutiae, technics, and methods of caring for the acutely sick to have time or energy to think of health. Medical schools, dominated by hospital staffs, indoctrinate each new generation of physicians with the idea that the functions of the doctor are to discover, identify, and treat disease. That these are proper functions of the physician is uncontroversial. But to assume that these are the sole services of practicing doctors is dangerously reactionary. Actually, the treatment of disease

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.

per se is of secondary importance. It is only the patient, obviously sick or relatively well, who is truly important.

A fifth therapeutic objective is the construction of health to as near the optimum as possible. Constructive medicine is more than prevention, because prevention is applied to specific disease entities. Avoidance of these does not necessarily increase the health of the individual. Immunization against smallpox does not make the individual healthier; it merely prevents him from getting smallpox. Preventive medicine was a vast step forward in the days when health was defined as that state existing in the absence of disease. We hope that medicine has outgrown this definition of health. Health is far more than the absence of demonstrable disease. Optimum health may be defined as that state of being which exists when all the functional capacities of the organism are near the maximum that we can expect for the species, in relation to the phase of maturation of the individual. Functional capacities, of course, include both psychic and somatic reserves for stresses. Such perfection of health is obviously visionary and unattainable, but it may be approached.

Normal and optimum are not identical. Normal means average and therefore is really synonymous with mediocrity. Constructive medicine is the cultivation of superior health. It is applicable to infants, children, young adults, and aging senescents.

The concept of constructive medicine is more quickly appreciated by laymen than by physicians, perhaps because the public is less preoccupied with disease. Furthermore, it meets with less resistance than the more limited concept of prevention. Prevention has a negative connotation, suggesting rules, prohibitions, and "don'ts." Furthermore, prophylactic accomplishments are demonstrable only by statistics, which have little or no emotional appeal. Even strenuous employment of almost vicious "scare campaigns" meet with immense inertia and resistance, or produce irrational panic and iatrogenic neuroses. Most people, left to their own devices, prefer to gamble rather than to take the trouble to protect themselves. The sad daily toll of avoidable automobile accidents, the rising incidence of obesity with all its associated ills, and the continuing daily combustion of cigarettes in astronomical numbers confirm this conclusion.

In contrast, constructive medicine offers something immediately profitable to the individual. Any enhancement of vim, vigor, and endurance in the ability to accomplish today's work, or any improvement in the sense of well-being, is appreciated. Sometimes this may be done by merely raising a "normal" hemoglobin to optimum levels. The patient feels the difference at once. This is much more convincing than a promise of future protection against some possible disaster.

The practical application of constructive medicine, the "how," cannot be considered in this brief editorial. It demands much of both patient and physician. Health in later years cannot be given, nor bought, but must be earned. This demands that the mature individual (1) seek assistance and education, and (2) conscientiously follow therapeutic guidance. Truly effective constructive medicine for individual adults requires much of the physician. He must:

1. Discard much of the indoctrinated philosophy that his sole role is to discover, identify and treat disease.
2. Appreciate the indivisible functional somatic-psychic unity of the individual.
3. Unlearn the habit of thinking in terms of disease entities.
4. Conceive health as a positive, relative, variable, asymmetric state, amenable at all times to improvement.
5. Possess exceptional comprehension of the functional changes inherent in aging and especially of the interrelationships of physiologic processes and the remote consequences of impairments.

6. Be an exceptional teacher, because instruction by clear, accurate, understandable, and convincing explanation and inspiration to exert effort on their own behalf is the doctor's primary service to his patients.

7. Possess exceptional foresight. Constructive medicine is foresight applied. Foresight requires recognition of potential sources of injury before injury occurs. Stage settings can forewarn of action to follow. A continual alertness for situations, habits, excesses, deficiencies, stresses, and strains which may contribute to avoidable damage is essential. This means comprehension of the complex and variable causation of chronic progressive disorders, of the mechanisms involved in their pathogenesis, and of both normal physiology and the consequences of imbalances. The significance of etiologic analysis cannot be overemphasized, since the effectiveness of any therapy, whether curative, preventive or constructive, is predicated upon thorough elimination or neutralization of causative influences.

8. Possess unusual interest, patience, sense of thoroughness, curiosity, a high index of suspicion, and be relatively immune to the need to produce dramatic, obvious results by the exercise of his skills.

DR. STIEGLITZ ADDRESSES SYMPOSIUM

Dr. Edward J. Stieglitz addressing the Second Annual Merrell Gerontological Symposium on Constructive Medicine in Aging, in Cincinnati, January 13. Dr. Stieglitz conducted an hour-long panel discussion, after which he gave a summary of the entire proceedings. The Symposium this year was devoted to the topic, "Problems of the Mind in Later Life."

In summary, the potentialities of constructive medicine include (1) an increase in mental and physical efficiency, resulting in greater productivity, (2) an increased sense of well-being, which obviously reduces emotional tensions and diminishes the likelihood of psychosomatic illnesses, (3) earlier detection and therefore more effective therapy of asymptomatic chronic progressive disease, (4) less acute illness, since with more nearly optimum health the barriers of resistance are stronger in infective, toxic, and psychic disorders alike, (5) increased endurance and enhanced capacity to learn, (6) improved prognosis in coincidental acute illness or injury, since with better health the capacity to repair is augmented, and (7) additional depth and breadth as well as length of life.

Such rewards are worthy of great effort and as golden as the Golden Rule.

Edward J. Stieglitz, M.D.

CAT

MEDICAL EMERGENCY AND DISASTER PROGRAM

How many persons would have been injured or lost their lives if Hurricane Hazel or Connie should have passed directly through our Metropolitan Area? How many fires and broken water pipes would have contributed to the disaster? What would happen if medical resources were not mobilized should there be an enemy attack? In any widespread disaster, no matter what the cause, the number of casualties often far exceeds the available medical facilities. The handling of mass casualties requires a different technic from the treatment of similar injuries to a relatively few persons. To foresee and prepare for disasters is not as foolish as some think. The effort is not lost, because those who are trained will not forget soon what they have learned and will be prepared for any eventualities.

Individually and in groups, physicians should be concerned with need for continuing care of their patients in the event of disaster. If this premise is accepted, it is our duty as physicians in this community to train and prepare ourselves to the best of our ability for this task.

This responsibility was officially recognized in the District when the Medical Society, at a business meeting on March 7, voted unanimous approval of the recommendation of its Executive Board to sponsor courses for the education and training of physicians in the Medical Care of Mass Casualties. A curriculum has been developed by the Society's Committee on Emergency Medical Service which will acquaint doctors with treatment procedures and technics. Ten hours of instruction divided into five 2-hour sessions will be given on 5 consecutive evenings. This course will be repeated several times over a 12-month period. The Medical Department of the Armed Services will provide expert instructors in the handling of mass casualties.

The Committee on Emergency Medical Service is also developing on a voluntary basis a Medical Emergency and Disaster Service flexible enough to cope with any disaster. Graduates of the course will become physician units of MED Service. As such they will direct emergency care to mass casualties in the field or in the hospital.

Our community, our patients, our families and our neighbors expect us to be capable and trained for any emergency. Let us not fail them.

Leo J. Schildhaus, M.D., *Chairman*
James E. Chapman, M.D.
Edwin C. Mitchell, M.D.
Arch S. Russell, Jr., M.D.
Special Subcommittee, Committee on Emergency Medical Service

PREPAYMENT ON THE MARCH

Medical Service of the District of Columbia will soon be 8 years old. The Plan began operations in April, 1948. Almost immediately it met with an enthusiastic reception. At the end of 1948 more than 100,000 persons had enrolled. Since then, residents of the Washington area, convinced that the protection offered by Medical Service is the best they can obtain, have continued to enroll at a rate that has placed the Plan in a position of leadership.

The more than 1,800 Participating Physicians have naturally been engrossed in the development of their prepayment plan, but they have not lost sight of Group Hospitalization, which pioneered the prepayment movement in this area.

The recent announcement from Chicago that enrollment in the 86 approved Blue Cross Plans has passed the 50 million mark by a substantial margin is an emphatic reminder that far from losing ground to competitors, as some critics not too long ago predicted, Blue Cross is on the march, as it has been since the movement began in 1929. The number of persons enrolled in Blue

Cross is much larger, for example, than either the Republican or the Democratic votes cast in the 1952 Presidential election. Last year Blue Cross Plans paid hospitals an estimated $885,000,000 for services they rendered to subscribers.

It is gratifying to note that the rate of growth of Group Hospitalization, Inc., our local Blue Cross Plan, has exceeded that of Blue Cross nationally. Established in 1934, Group Hospitalization is one of the oldest prepayment plans in the country. From the beginning it enjoyed a slow but steady growth. Gradually, as people realized that the principle of prepayment was sound, the Plan grew more rapidly. Today it is protecting more than 653,000 persons who live and work in Washington and nearby Virginia and Maryland. More than 530,000 of these persons also have the protection of Medical Service of the District of Columbia.

What is responsible for the unusual growth of Blue Cross and Blue Shield? Statistics show that in 1933, shortly after the prepayment idea was conceived, 13.5 per cent of the American people actually needed hospital care but only 6 per cent received it. Charity cases on the average rose from 15 per cent in 1929 to 40 per cent in 1934, the year Group Hospitalization was established, according to one survey. Another estimate reported that more than 50 per cent of the public could pay their hospital bills only in part or not at all. The answer to the problem of helping patients pay their way for hospital care and assuring hospitals of a source of steady income was born of an acute need. It came in the form of hospital prepayment.

Another reason for the widespread acceptance of Blue Cross and Blue Shield is the local character of the Plans. Both Group Hospitalization and Medical Service, for example, are governed by Boards of Trustees so apportioned that community representation is assured. It is necessary that the Plans be flexible so that they may meet constantly changing conditions in the field of medical economics. Today, Group Hospitalization is offering benefits that were unheard of 25 years ago, when the Blue Cross movement got under way. Only a few weeks ago benefits offered by the Standard Hospital Service Contract were substantially increased (see page 226 of this issue). And Medical Service, during the relatively few years it has been in operation, has found it feasible, from time to time, to incorporate new features and to expand others. As a result, the benefits offered by the Plans are realistically related to subscribers' needs.

With the future of modern medicine still unfolding and with new drugs and methods constantly being developed to battle crippling and fatal illnesses, we can expect increased public demand for the finest hospital and medical care that can be provided. There is every reason to believe that the Nation's choice of a method of paying for this care will increasingly be through Blue Cross and Blue Shield, which have become solidly established as a part of the American way of life.

F. P. Rawlings, Jr.
Director, Group Hospitalization, Inc.

In and Out of Focus

BY THE OBSERVER

Social Security and the Doctor (cont.)

In the January issue of the Medical Annals your Observer reported that at a meeting of the AMA's House of Delegates in Boston last December a resolution was adopted recommending to state medical societies that they poll their memberships to ascertain their views in regard to the inclusion of physicians on a compulsory basis under the Old Age and Survivors Insurance provisions of the Social Security Act. State societies undertaking the polls were requested to transmit the results to the Association's Board of Trustees as soon as possible.

At a meeting held shortly after the adoption of this recommendation, the Society's Executive Board authorized a poll of District physicians. The Secretary was directed to communicate with the AMA headquarters for the purpose of obtaining suggestions as to how the questions should be phrased. Upon receiving a reply, ballots were prepared for distribution.

Ballots were mailed members shortly after the first of the year with the request that they be returned not later than February 15, 1956. On that date a final count was made with the following result: 572 favored voluntary coverage; a surprising 123 favored compulsory coverage; 37 disapproved of both compulsory and voluntary coverage; and 5 disapproved compulsory coverage. A total of 737 ballots was returned of 1,437 mailed to Active and Life members.

The above information was reported at a business meeting of the Society on March 7, 1956, and transmitted to the AMA's Board of Trustees as had been requested.

Uncertainty as to the implications of the poll has been expressed by some members of the Society who insist that questions and answers were open to varying interpretations. It would seem to your Observer that they have lost sight of the prime objective of the poll, which was to determine the views of the medical profession, not only in the District but throughout the country, with respect to the AMA's position on the inclusion of physicians under the Social Security Act on a compulsory basis. If the vote elsewhere is in line with that in the District, it is evidently the wish of the majority that physicians be given a choice as to whether or not they wish to participate in Social Security benefits.

It has been suggested that the canvass might have been more significant if physicians favoring voluntary coverage had been asked, "If Social Security benefits are made available to physicians on a voluntary basis, would you take advantage of it?" Interesting as this information would have been, it really has no bearing on the original purpose of the poll.

What cognizance Congress will take of the AMA's position in this matter remains to be seen. One gains the impression that if the lawmakers are insistent that doctors be not set apart from others in relation to Social Security coverage, the AMA will not take too strong a stand, because it is concerned with legislation of much more importance to the medical profession. On the other hand, there is a feeling in certain quarters that if the doctors agree to voluntary participation, and it becomes law, it will not be too long before compulsory coverage will be substituted. What will happen remains to be seen, but a decision should not be far distant.

★

Facts About Licensure Many District physicians are apparently unfamiliar with licensure requirements in the adjoining states. This is indicated by the numerous inquiries which have been received at the Society's Executive Offices in the past few months. A surprising number of physicians seem to be under the impression that the so-called borderline certificate is a license to practice. Others have never heard about the certificate, or that it is required for District doctors who attend patients in either Maryland or Virginia but are not licensed in these states. Undoubtedly, if all the facts were known, the same might be said of physicians in these states who see patients in the District.

The borderline certificate is not of recent origin. In fact, it has been granted by the District's Commission on Licensure and medical examining boards of nearby states for thirty or more years. The purpose of these certificates is to permit physicians licensed in one jurisdiction to cross state lines for the purpose of treating patients in their homes who would otherwise come to their offices. In other words, if a patient is too ill to leave his home, the District doctor holding a borderline certificate, but no license in those states, can legally go into contiguous counties in Maryland or Virginia to care for him.

The certificate does not authorize a District physician not licensed in Maryland and Virginia to carry on a regular practice, establish an auxiliary office where he can see patients, or serve patients regularly on an appointment basis in hospitals in nearby areas.

If a District physician desires to carry on a regular practice in either nearby Maryland or Virginia, he should contact the examining boards in either or both of these states for forms on which to apply for a license by reciprocity. This is not only the safe but the proper thing to do.

Here, then, for the convenience of members of the Society who wish to make application are the names and addresses of those to whom requests for forms should be directed:

Dr. K. D. Graves, Secretary
State Board of Medical Examiners of Virginia
631 First Street, S.W.
Roanoke, Virginia

Dr. Lewis P. Gundry, Secretary
Board of Medical Examiners
1215 Cathedral Street
Baltimore, Maryland

Where questions arise in regard to District licensure, queries should be made to:

Mr. Paul Foley, Deputy Director
Department of Occupations and Professions
District of Columbia
1740 Massachusetts Avenue, N.W.
Washington 6, D. C.
Telephone: NAtional 8-6000, Ext. 543

In view of the complications which may arise when District physicians ignore licensure requirements in nearby states, readers are requested to broadcast this information. Under certain circumstances it might be a serious matter to the physician who failed to observe them.

★

AMA's Public Opinion Poll

Whatever misgivings AMA officials might have had as to the probable results of its recently sponsored opinion poll, they were dissolved in as favorable findings as could be wished for. Not that they exude all sweetness and light, but at least there was more to cheer about than had been anticipated.

As the AMA's Public Relations Department put it, in a release to the press, "From it emerged a picture of what people like about and expect from their doctors: sympathy, patience, and understanding, rather than guaranteed cures and 'wonder drugs.' What they criticize is a matter of time and economics, not of personality or ability."

Persons interviewed during the survey were selected in such a way that the proportion of people from various age, economic, geographical, and other groups matched the proportion of such people in the total U. S. population. In the group were 3,000 private citizens, 500 practicing physicians, 100 editors, commentators and columnists, 100 attorneys, 100 registered nurses, 100 registered pharmacists, and 100 non-physician executive secretaries of state and county medical societies.

Here were some of the major findings:

Eighty-two per cent of Americans have family doctors. The percentage is slightly higher among rural farm dwellers, white collar workers, middle-aged, middle-income, college-trained people, and central state residents. Most of these people regard their doctor as "someone special" and feel that it is extremely important to select the right one.

Eight out of 10 people think that their doctor is "different," 32 per cent giving as reasons personal interest, sympathy, and kindness; 19 per cent, competence, intelligence, and education; 17 per cent, friendliness, personality, and manner; and 9 per cent, frankness and honesty. A smaller number mentioned availability, patience, understanding, acceptance of payment delays, and lower fees. Only 1 per cent of the persons interviewed do not like their family doctor and 3 per cent give qualified or no replies.

There is much more in the way of factual data about the family physician. However, all of it seems to emphasize the high regard in which people generally hold their own physicians.

Three thousand of those interviewed were asked their views regarding "other" doctors. Although 23 per cent was the largest proportion answering "true" to any complaint listed about their own doctor, 60 per cent evaluated complaints about doctors in general. A comparison of the responses follows:

> "—Doctors don't give patients as much time as patients would like: about 'other' doctors, 60 per cent say 'true'; about 'my' doctor, 18 per cent true.
>
> "—Most doctors try to hide other doctors' mistakes: 54 per cent 'true' (not asked about personal physicians).
>
> "—Doctors are hard to reach for emergency calls: other doctors, 51 per cent 'true'; my doctor, 19 per cent.
>
> "—Doctors are not frank enough: other doctors, 46 per cent 'true'; my doctor, 15 per cent.
>
> "—They charge too much: other doctors 43 per cent 'true'; my doctor, 16 per cent.
>
> "—They think they are always right: other doctors, 43 per cent 'true'; my doctor, 23 per cent.
>
> "—They keep people waiting too long: other doctors, 41 per cent 'true'; my doctor, 15 per cent.
>
> "—They don't have enough personal interest in patients: other doctors, 39 per cent 'true'; my doctor, 11 per cent.
>
> "—Their charges have gone up faster than other living costs: other doctors, 35 per cent 'true'; my doctor, 13 per cent. These figures were about the same for the statement that doctors make too much money compared to their patients.
>
> "—The various other charges are considered 'true' by less than one-third of the public."

Surprisingly, doctors were more critical of themselves than were their patients. In evaluating the validity of the listed complaints against physicians, the percentage of physicians stating it as their belief that some of the charges were true ranged as much as 20 per cent above the public's.

One of the surprises of the study was that only half of the public had ever heard of the American Medical Association. Those who had heard of the AMA remembered chiefly the general publicity given the Association with respect to drug researches, professional standards, conventions, and opposition to Government medicine. Only 20 per cent of this group remembered anything specific. Forty-three per cent said their opinion was "all good," 26 per cent that it was "more good than bad," 13 per cent "about equal," 4 per cent "more bad than good," and 1 per cent "all bad."

Only 25 per cent of those surveyed who knew anything about the AMA and about half the doctors believe it is run by minority rule. Only a few found this objectionable, 69 per cent of those familiar with the AMA and 77 per cent of the doctors stating that the organization's policies are what doctors in general approve of.

Surprisingly, neither the public nor doctors were very critical of the AMA's political activity. One-fourth of the public and about half the doctors think that this activity is about right; 15 per cent of the public and 16 per cent of the doctors said it was too much; 4 per cent of the public and 19 per cent of the doctors that it is not enough.

As had been stated, AMA officials have a right to be more than a little pleased over the results of its first excursion into the public opinion poll field. If it fares as well with public opinion as the poll indicates during the critical years immediately ahead, there is very little reason to be deeply concerned about medicine's future.

★

. . . Without Honor . . .? One of the perennial problems confronting succeeding program committees for the Society's ANNUAL SCIENTIFIC ASSEMBLY has been to determine what the ratio of "visiting firemen" to local physicians appearing on the ASSEMBLY program should be. There has been no complete unanimity of opinion on this subject. Some committees have taken the position that there should be more opportunities offered well-qualified and widely recognized physicians in the community. Others—and they seem to be in the majority—insist that although they agree with this view in principle, only a program in which outside speakers predominate will attract sufficient attendance to justify the effort which goes into it. The only purpose of these comments is to direct attention to arguments pro and con and attempt to clarify some of the thinking on this subject.

Those strongly in favor of the inclusion of more Society members on ASSEMBLY programs make these points:

> Washington is rapidly becoming one of the country's great medical centers. Its reputation is being built on the achievements of physicians now active, not a few of whom have received national recognition. These physicians should have the opportunity to present under the most favorable circumstances subject matter in which they have attained distinction.
>
> The ASSEMBLY is the one large scientific meeting sponsored by the Society during the year where speakers are heard to the best advantage. In fairness, therefore, the program should be made up largely of District physicians.
>
> If speakers are carefully chosen and their subject matter is of a timely nature, there need be little concern whether the physician is from Washington or some outside medical center.

Those who do not fully concur say the ASSEMBLY's history serves only to emphasize the following points:

> The record shows that only programs liberally sprinkled with nationally known speakers attract a large attendance. At times even this is not sufficient because Washington offers so many opportunities to hear internationally known leaders in medicine.
>
> This is no reflection upon Washington physicians. It is a situation which is common to all communities. The obvious reason is that a physician possessing the knowledge and ability to present subjects of particular interest to a substantial number of practitioners has been heard many times by the profession in his community and then, of course, he rubs elbows and talks with his fellow practitioners daily. Program committees for the ASSEMBLY must take this into account in making their plans.

These are not all the pros and cons by any means, but they should suffice to emphasize human factors which must be taken into account in setting up the program for the ASSEMBLY.

The doctor in a community is like a member of a family who, regardless of his achievements and the recognition given him away from home, is never looked upon by his own as a celebrity. Perhaps within limits this contributes to a more comfortable and peaceful existence. It would be regrettable, however, if future program committees for the ASSEMBLY did not take full advantage of the best talent in our midst to an extent consistent with experience of past committees.

★

A Worthy Opponent

Few physicians not closely associated with the activities of the state or county medical societies in the 1930's can appreciate the change which has taken place in the profession's attitude toward the controversial health insurance issue. Those were the days of unyielding and sometimes vituperative insistence on the complete fallacy of the opponent's position. There was no such thing as a physician's taking a middle-of-the-road stand on health insurance, voluntary or compulsory. He was either for or against forces that advocated measures with the obvious intent of destroying the private practice of medicine.

There are still extremists on both sides of this issue. However, they are very much in the minority, because this is a day of moderation. Still opposed to compulsory health insurance, organized medicine has long since approved voluntary health insurance plans. Advocates of compulsory health insurance are less aggressive than they once were and, while not sanguine about its future, are willing to string along with the voluntary movement for a time at least.

In the 1930's, Dr. Morris Fishbein, Editor of the *Journal of the American Medical Associa-*

tion, was the AMA's aggressive spokesman in the health insurance controversy. Brilliant, militant, and caustic, he gave no quarter and asked none. His most effective weapon was merciless ridicule. Although his colleagues were often amused by his skill in taking less articulate opponents apart, they were also disturbed by his frequent brashness. Lay audiences laughed as heartily as anyone at his stories and sharp wit but they frequently resented the manner in which he pilloried those who disagreed with him. Nevertheless, the most critical had to admit that Dr. Fishbein was a formidable opponent and usually on the winning side. For many years he was "Mr. AMA" regardless of who happened to be head of the official family and he was so accepted throughout the country.

A far different but a courageous leader of the pro-compulsory health insurance forces was Dr. Michael M. Davis (Ph.D.). Whatever his enemies—and there were many in the medical profession—might say about him, he never withered under the merciless fire of his opponents. An earnest, scholarly, socially-conscious protagonist, he clung to the cause to which he was completely dedicated despite many defeats. Down through the Roosevelt and Truman Administrations he must have held high hopes that his goal would be realized. But these went aglimmering with the incoming Eisenhower Administration.

These reflections were prompted by the announcement that the Committee for the Nation's Health, Inc. of Washington, D. C. had suspended activities. Reasons for this were set forth in a communication to the organization's Board of Directors, of which Dr. Davis is a member. He is also Chairman of its Executive Committee which authorized the letter. Board members were assured that the fight for a system providing "complete medical services available to all without financial barriers" would go on. A new approach, it was indicated, would be made which would "require a wide range of educational and legislative measures." "There may be advantages," the communication continued, "in separating the promotion of educational measures concerning medical services from the promotion of legislation that is primarily concerned with financing."

It was suggested that a study would be made to determine how such a program and organization could be developed. As might have been expected, credit is taken for the progress which has been made in the voluntary health insurance field and the stimulus given medical societies to enter the medical prepayment field.

Dr. Davis will undoubtedly continue to lead the crusade for compulsory health insurance. He could hardly be expected to do otherwise. As for his opponents, the bitterest of them must admit that a man who has fought honestly and courageously for a lost cause for nearly three decades possesses qualities which are worthy of their sincere respect.

T. W.

PUBLIC HEALTH ADVISORY COUNCIL

OMER W. CLARK

Chairman, Public Health Advisory Council to the Board of Commissioners, District of Columbia

A Public Health Advisory Council was created in the District of Columbia by Reorganization Order No. 60, dated July 28, 1953. All of this order except part 5, which is the oath of office taken by each member of the Council, and part 10, which is the effective date of order no. 60, is quoted herein:

"Part I. Purpose: To increase citizen participation, lay and professional, in the municipal government's public health program and to act in an advisory capacity to the Commissioners and the Director of Public Health on public health matters affecting the general public.

"Part II. Functions: It is the intent of the Board of Commissioners that the Public Health Advisory Council shall, in general, assist and advise them and the Director of Public Health in the following respects:

1. Study and make appropriate recommendations with respect to proposals for new policies and statutes or changes in existing policies or statutes, affecting the public health program.
2. Advise on community health needs and desires and the formulation and execution of programs necessary to satisfy those needs and desires.
3. Advise and assist in coördinating the programs and activities of the Department of Public Health with those of community groups, associations, and professional organizations.
4. Interpret the activities of the Department of Public Health to the public.
5. Aid in stimulating public interest, understanding and participation of the community in solving public health problems.
6. Study community health needs and resources and assist in developing budgetary needs of the Department of Public Health.
7. Evaluate, upon request of the Board of Commissioners, the qualifications of candidates for the position of the Director of Public Health and make appropriate recommendations.
8. Study and evaluate the operations and activities of the Department of Public Health and make appropriate recommendations with respect to changes which may appear desirable.

"Part III. Composition: To consist of 9 members (residents of the District of Columbia for a period of at least 3 years immediately prior to appointment) appointed by the Board of Commissioners on the basis of personal qualifications. Persons appointed to membership on the Council shall be selected in so far as possible in such a way as to provide in the aggregate a maximum degree of perspective on, and insight into, the public health needs and desires of the community. The Commissioners may invite nominations from medical, dental, nursing, health, engineering, and civic organizations of the community or the public at large. At least 3, but not more than 4, members shall be members of the profession cited. There shall be no *ex officio* members and no members representing any special interest. Members shall hold no full- or part-time office for which compensation is paid from funds of or Federal grants to the District of Columbia.

"Part IV. Term of Office: To be fixed at 3 years except for initial appointments, as follows: Of the 9 persons first appointed as members of said Council, 3 shall be appointed for 1 year, 3 for 2 years, and 3 for 3 years. Should a vacancy occur through the death, incapacity, resignation, or removal of a member, a successor shall be appointed to complete the unexpired term of that member. Members shall be eligible for reappointment.

"Part VI. Compensation: Members shall serve without compensation but appropriate expenses will be reimbursed as indicated below.

"Part VII. Organization: The Public Health Advisory Council shall determine its own organization and perfect its own rules of procedure. The Council shall elect its own officers annually from among its own members. It shall convene at least 9 times each year at regularly scheduled meetings. It shall hold additional meetings at the call of the Board of Commissioners, the presiding officer of the Council, or majority of the Council membership.

"Part VIII. Administration: The Director of Public Health shall assist the Council in matters of administration of the Council and shall provide it with necessary stenographic, clerical, and housekeeping services. Expenses incurred by the Council as a whole, or by individual members, when authorized by the Commissioners or their designated agent, will be met from funds provided for the administration of District affairs.

"Part IX. Reports: Reports and recommendations of the Council shall be furnished to the Board of Commissioners and to the Director of Public Health and may be released at such time and under such circumstances as the Board of Commissioners or the Council may determine."

Pursuant to the above, the following named persons were appointed as members of said Council, effective on and after September 15, 1953:

To serve until September 15, 1956:
  Major Omer W. Clark
  Dr. Hugh H. Hussey
  Dr. C. V. Rault
To serve until September 15, 1955:
  Dr. W. Montague Cobb
  Professor Benjamin C. Cruickshanks
  Mr. Alfred A. McGarraghy
To serve until September 15, 1954:
  Mrs. Henry A. Bartlett
  Miss Ruth A. Heintzelman
  Mr. Herman A. Johnson

A special meeting of the Board of Commissioners was held, October 6, 1953, for the purpose of administering oaths of office to the members of the Council. Immediately following this meeting the Council elected officers and made preliminary plans for future operations. Major Omer W. Clark was elected Chairman and Dr. Hugh H. Hussey was elected Vice Chairman of the Council.

It was decided that regular meetings would be held on the fourth Tuesday of each month except June, July and August. At the request of the Council, Mr. Richard S. Townsend of the Commissioners' staff was elected Secretary.

The Council has had for study and recommendations the following subjects; (1) regulations governing maternity and newborn care in hospitals in the District of Columbia; (2) salaries of professional personnel in D. C. General Hospital; (3) appropriations for the Department of Health; (4) scarcity of qualified professional personnel; (5) food inspection and public health engineering services; (6) medical research; (7) contracts with private hospitals and the Visiting Nurse Society; (8) Alcoholic Rehabilitation Clinic; (9) school medical inspection service; (10) mental health; (11) polio vaccine program for school children; (12) tuberculin testing in schools; (13) psychiatric service to the courts; (14) licensing of practical nurses; (15) Department of Public Health role in connection with Civil Defense program; (16) need for additional beds in D. C. General Hospital; (17) closer coöperation with the medical teaching schools; (18) coördination of functions of Public Health Advisory Council and Hill-Burton Advisory Council; (19) tuberculosis control program.

When the minutes of each meeting are approved a copy is sent to each of the Commissioners of the District of Columbia and to the Director of Public Health. This procedure keeps the proper officials of the government of the District of Columbia fully informed regarding subjects discussed at all meetings of the Council, and the recommendations resulting from the consideration of such subjects.

The Council has been assisted, when needed, by staff personnel of the Department of Health, other divisions of the District Government, members of the medical fraternity, and citizens. For such advice the Public Health Council is very grateful.

WOMAN'S AUXILIARY NOTES

Dr. Henry Segal spoke on "The Myth of Brainwashing" to a capacity audience in the Library on March 14. From his experiences in reëvaluating repatriated prisoners of war in Korea, Dr. Segal told of the insidiously clever technics employed by the Chinese Communists in their endeavors to "brainwash" American soldiers. Because of his outstanding work as Chief of the Neuropsychiatric Service of the U. S. Army Hospital in the Far East, Dr. Segal was recently awarded the Legion of Merit. Following his talk, enthusiastic Auxiliary members kept Dr. Segal busy answering questions until it was necessary for him to dash away in a waiting taxi in order to catch a train for a speaking engagement in New York.

Several years ago the National Auxiliary established a Mental Health Committee in addition to its other standing committees. The Auxiliary believes that we, as doctors' wives, can assist with the prevention and treatment of mental illness through our traditional pattern of community service. Our Mental Health Committee Chairman, Mrs. John A. Kneipp, is recruiting volunteers who are interested in this particular work. She can be reached at Oliver 4-0783.

The main business of the March meeting was the election of officers for the year 1956–57. The nominating committee presented a slate of officers, who were unanimously elected. They are:

President-elect: Mrs. James E. Wissler
First Vice President: Mrs. M. Noel Stow
Second Vice President: Mrs. John A. Reisinger
Corresponding Secretary: Mrs. Hugh O. House
Assistant Corresponding Secretary: Mrs. Clayton H. Hixson
Recording Secretary: Mrs. J. Blaine Harrell
Assistant Recording Secretary: Mrs. James Peter Murphy
Treasurer: Mrs. Julius Radice
Assistant Treasurer: Mrs. Herbert H. Schoenfeld

These new officers will assume their duties on July 1 when Mrs. Albert E. Marland, our new President, takes office.

Congratulations and best of luck!

MRS. I. PHILLIPS FROHMAN
Publicity Chairman

PROCEEDINGS OF MARCH BUSINESS MEETING

Dr. W. Ross Morris, President of the Medical Society of the District of Columbia, presided at the business meeting, March 7, which was held particularly for the purpose of nominating new officers of the Society and to transact business which needed action prior to the regular Annual Business Meeting in May.

Dr. C. Willard Camalier was called upon to read the Report of the Committee on Medical Care, which was accepted by the Society with praise for its excellence. A review of the malpractice situation in the District of Columbia for 1955 was contained in the report of the Committee on Professional Liability Insurance, presented by its Chairman, Dr. Alfred A. J. Den.

The Interim Report of the Executive Board of the Society was presented by the Chairman, Dr. Wallace M. Yater, and was accepted in its entirety.

The reports of the Executive Board and the Committee on Medical Care are published following this brief account of the proceedings.

Dr. Henry L. Darner, Chairman of the Nominating Committee, was asked to submit the nominees for new officers of the Society, which are listed on page 222. No additional nominations were made from the floor. The meeting was then opened for new business.

A motion was made and carried that the Society recommend to the Board of Trustees of Medical Service of the District of Columbia that it give consideration to increasing its membership by four additional physicians nominated by the Society.

The Society voted favorably on a motion to appoint a study commission consisting of seven members who would consider the reorganization of the Society and report at the business meeting in March, 1957.

INTERIM REPORT OF THE EXECUTIVE BOARD

As is customary at the March Business Meeting only the most essential business is included in the Executive Board's report. A comprehensive review of the activities and actions of the Board and the Society's committees will be submitted for your consideration at the Annual Business Meeting to be held on May 2.

Survey of Society re Compulsory vs. Voluntary Coverage of Physicians under Social Security. In a resolution adopted by the House of Delegates of the American Medical Association at the Boston meeting in December, 1955, it was pointed out that a misunderstanding existed in regard to the position of the medical profession on the question of the inclusion of physicians under the Old Age and Survivors Insurance provisions of the Social Security Act. The charge had been made that in taking the position in favor of voluntary as against compulsory Social Security coverage for physicians, the Association had no definite knowledge of the views of the majority of its members. Results of the few polls taken by medical societies, it was said, had been inconclusive. The resolution therefore proposed it be recommended to all constituent state medical societies that a poll be taken of their memberships on this question and that the results be transmitted to the American Medical Association's Board of Trustees.

In compliance with this resolution the Executive Board authorized a canvass of the Society's membership. This was undertaken the first of the year, members being requested to return their "ballots" by February 15, 1956.

Results of the poll were as follows:

572 favored voluntary coverage
123 favored compulsory coverage (of these 8 said they would rather have compulsory than no coverage)
37 disapproved both compulsory and voluntary coverage
5 disapproved compulsory coverage

A total of 737 ballots were returned of the 1,437 mailed to Active and Life members.

As requested above, this information is being transmitted to the AMA's Board of Trustees.

Recommendations of the Committee on Emergency Medical Service re Disaster Program. The District's Civil Defense medical program has long been and still is dormant. Some of the ablest members of our Society who interested themselves in this matter have found it a fruitless and frustrating experience. Need for such a program has been all too apparent. The question has been how to go about it. This has deeply troubled the Society's Committee on Emergency Medical Service not only because it believes there is a need for such a program in the event of enemy attack, but because there is really no adequate medical plan in the District to cope with a natural disaster. It is this that prompted the Committee at its meeting on February 16 to propose a *voluntary emergency medical program* in which all members of the Society would be asked to coöperate.

Essential to carrying out such a program is the education and training of physicians in the care of mass casualties. A curriculum has been developed by the Committee which will acquaint them with treatment procedures and technics. Ten hours of instruction divided into five 2-hour sessions to be given on 5 consecutive evenings is planned. There will be a number of guest speakers from both the military services and the Society. In an effort to accommodate as many members of the Society as possible it is hoped to offer the proposed course several times over a 12-month period.

Another feature of the Committee's program is the development of a medical organization flexible enough to cope with either a natural disaster or an enemy attack. Details have been submitted by the Committee and have been approved by the Board with the understanding that they will of necessity have to be modified as experience demonstrates the need.

The Board voted unanimously to approve the recommended course and the proposed organization of emergency medical services, both on a voluntary basis, and hopes that the Society membership will lend its wholehearted coöperation.

Nomination of Vice President of Washington Academy of Sciences. Dr. Frederick O. Coe has represented the Society as Vice President of the Washington Academy of Sciences for a number of years. He has been a most adequate representative and it is the Board's recommendation that he be nominated to succeed himself in this position.

Nominations of Members of Board of Trustees of Medical Service for Three-year Terms. As is customary at this time of the year the Society is requested to nominate its representatives on the Board of Trustees of Medical Service of the District of Columbia to succeed members whose terms expire at the time of the Service's Annual Meeting, which will be held in April. Those whose terms will expire this year are Drs. William P. Herbst, Jr., Arch L. Riddick and Donald Stubbs.

The Board recognizes the outstanding service rendered by all of these representatives. Drs. Herbst and Riddick have served loyally and ably, the former as Vice President of the Service, the latter as chairman of important committees. Dr. Stubbs has distinguished himself not only as the able President of the Service but, as one of the leaders of the Blue Shield movement nationally, he is now carrying on very important negotiations.

It was with great reluctance that the Board decided not to recommend the renomination of all of these physicians. However, most of you are familiar with the experimental pilot medical care program instituted by the Service in February 1954 and the plans now under consideration for broadening medical benefits. In the light of these developments, the Board decided to recommend the nomination of one representative each in the fields of internal medicine and general practice.

The renomination of Dr. Stubbs is recommended by the Board because of his widely recognized organizational ability and his dedication to what has frequently become a time-consuming and difficult task. As a representative of the internists the Board proposed Dr. Henry D. Ecker. Dr. W. R. Perkins, a well-known general practitioner, is the Board's selection to represent his group.

Appointment of Member of the Board of Trustees of Group Hospitalization, Inc. In the Board's opinion the physicians representing the Society on the Board of Trustees of Group Hospitalization, Inc. have rendered an excellent account of themselves. One of the newer members of the Board is Dr. A. Magruder MacDonald. He is completing his first 5-year term in March 1956.

The Board submits for the Society's approval its recommendation that Dr. MacDonald be reappointed for another 5-year period.

Annual Financial Report for 1955 and Estimated Budget for 1956. [Space limitations will not permit the publication of the Report and the Budget. Members who are interested and could not attend the Business Meeting at which they were presented can obtain copies by calling the Society's office.]

Summary of Membership for 1955 . . . shows the total membership at the beginning of January 1, 1955 as 1,941. This number had increased to 2,035 as of the last day of the year. It will be noted that there was a gain of 58 Active members during the past year and 38 Associate members. In the opinion of the Board, the membership has shown a steady and satisfying growth.

Proposed Amendments to the Constitution and By-laws: Amendments XXIX, XXX and XXXI. These amendments are submitted for the reasons stated below. These amendments cannot be acted upon at this meeting because the Constitution and By-laws requires that they be presented at one business meeting and voted on at the next.

AMENDMENT XXIX

Article VIII, Chapter VIII of the Constitution and By-laws is hereby amended by adding thereto the following: Section 3. The Grievance Committee shall consist of 12 members of the Society, whose tenures of office shall be as follows: four members shall be appointed by the President on the expiration of the tenures of the present Committee members for a period of one year; four members shall likewise be appointed for a period of two years; and four members shall likewise be appointed for a period of three years; and on the expiration of their respective tenures of office subsequent members shall be appointed for a period of three years. Members shall not be eligible for reappointment until the year following the expiration of a three-year term.

The purpose of the above amendment is to assure the stability of a very important committee of the Society. It requires time and experience to season a member adequately for this demanding assignment.

AMENDMENT XXX

Section 1. Article I of Chapter VIII of the Constitution and By-laws is hereby amended by adding thereto the following: 12. Committee on Medical Ethics and Professional Conduct.

Section 2. Chapter VIII of the Constitution and By-laws is further amended by adding thereto the following: Article XIV. The Committee on Medical Ethics and Professional Conduct, upon request of a member of the Society, the Executive Board, or any committee of the Society, shall review activities of members in relation to the Principles of Medical Ethics of the American Medical Association and report thereon to the respective individual and/or bodies submitting the request.

Section 3. The Committee on Medical Ethics shall consist of seven members appointed by the President and confirmed by the Executive Board on or before July 1, 1956, three of whom shall be appointed for three years, two for two years, and two for one year. On expiration of their respective tenures, subsequent members shall be appointed by the President and confirmed by the Executive Board for a period of three years. Members shall not be eligible for reappointment until the year following a three-year term.

The reason for the proposal of this amendment is to relieve the Grievance Committee, which is already heavily burdened, of the responsibility of interpreting the ethical nature of matters brought to its attention.

AMENDMENT XXXI

Article II of Chapter IX of the Constitution and By-laws is hereby amended by adding thereto the following: Section 12, Section on Internal Medicine and Allied Subspecialties.

At its last meeting on February 27, 1956 the Executive Board received a petition from a group of internists requesting that a Section on Internal Medicine and Allied Subspecialties be created. This requires an amendment to the Constitution and By-laws and the above is offered for adoption at a subsequent business meeting.

Amendments to the Constitution and By-Laws: XXVII and XXVIII. The following amendments were presented at a business meeting on September 21, 1955 and are now offered for adoption. Reasons advanced for their adoption follow the text of each amendment.

AMENDMENT XXVII

Section 1. Section 5, Amendment XVII of the Constitution and By-laws is hereby repealed.

Section 2. Intern or resident membership shall be limited to hospital interns or residents who are not engaged in the private practice of medicine. They shall be elected in the same manner as active members; they shall have the privilege of attending and participating in scientific sessions of the Society and shall receive its publications and notices of its scientific meetings. They shall not vote or hold office in the Society, but shall be subject to its discipline. Intern or resident membership shall terminate if the intern or resident member engages in the private practice of medicine, or upon termination of his internship or residency.

Following an investigation of resident-intern salaries locally the Executive Board agreed that the limitation of a salary ceiling of $2,400 for eligibility for this membership was unrealistic. The Board also felt that since citizenship is not required for Associate and Affiliate membership it should not be required for Resident-Intern, particularly when so many residents and interns from other countries are serving in our hospitals.

The Board recommends the adoption of this resolution.

AMENDMENT XXVIII

Section 1. Section 2, Amendment XI of the Constitution and By-laws is hereby repealed.

Section 2. There shall be elected at the Annual Meeting of the Society a Board of Censors, one of whom shall be elected for a term of three years, one for two years, and one for one year. At each Annual Meeting thereafter, there shall be elected one Censor for a term of three years. Applications for membership shall be made in writing on a form provided by the Society, indorsed by three active members of the Society, none of whom shall be a member of the Board of Censors, and sent to the Secretary who shall present their names in writing to the members of the Society. A period of two months shall elapse within which the members of the Society may register their approval or disapproval with the Board of Censors. All applications for membership shall be promptly delivered to the Board of Censors, who shall inquire into the standing of each applicant. After the elapse of the said two months the Board of Censors shall report in writing to the Executive Board, recommending the election of satisfactory applicants. The Executive Board, within thirty days, shall vote upon the election of each applicant and by a majority vote may elect the applicant to active membership for a period of one year.

Following said election, each applicant shall, within three months, sign an obligation to be governed by the Constitution and By-laws of this Society and pay the dues for the current calendar year. On the expiration of the one-year period of membership, the Executive Board shall report thereon to the Society and the Society may elect by a majority vote each one-year active member to full membership in the Society.

This amendment is submitted for the purpose of eliminating contradictions in Amendment XI which relate to the procedure to be followed in electing new members. As presented above, it is more explicit and specifically permits notification of members by mail of the names of all applicants for membership.

Election of the Nominating Committee. The following were elected members of the Nominating Committee in accordance with the rules adopted by the Society: Dr. Henry L. Darner, *Chairman*; Drs. Aubrey D. Fischer, William P. Herbst, James Peter Murphy, Thomas M. Peery, Duane C. Richtmeyer, and William J. Tobin.

Dr. Darner, the Chairman of the Committee, will present nominees for offices in the Society for the coming year following tnis report.

Conclusion. As stated in the beginning, the Annual Business Meeting of the Society will be held on May 2, 1956. The only other scheduled program of the Society before that time is that to be presented on President's Night, which this year will be held on April 19, 1956. A very unusual program is being planned. Both members and their wives are invited to attend.

Respectfully submitted,
Wallace M. Yater, M.D., *Chairman*
Ralph M. Caulk, M.D.
Karl C. Corley, M.D.
Hugh H. Hussey, M.D.
Preston A. McLendon, M.D.
W. Ross Morris, M.D.
Herbert P. Ramsey, M.D.
Theodore Wiprud, *Secretary*

NOMINATIONS

The Nominating Committee presented the following nominees for elective offices at the business session of the Medical Society of the District of Columbia on March 7, 1956:

For President-elect:
James W. Watts
For First Vice President:
Irving Burka
For Second Vice President:
Shirley Martin
For Member of Executive Board for 4 years:
W. Ross Morris
For Member of Board of Censors for 3 years:
W. Leroy Dunn
For Delegate to American Medical Association for 2 years:
Raymond T. Holden
For Alternate Delegate to AMA for 2 years:
Herbert S. Gates

Elections to the above offices will be held at the Annual Business Meeting of the Society, May 2, 1956.

REPORT OF THE COMMITTEE ON MEDICAL CARE

It was in the Committee on Medical Care of the Medical Society of the District of Columbia that the prepayment plan known as Medical Service of the District of Columbia was developed. This is the plan which was adopted by the entire Medical Society in 1946 and which has been functioning as primarily a surgical and obstetrical plan since that time.

Under the original aims and objectives of the plan as adopted there was a provision "to expand the services provided to include medical as well as surgical, obstetrical, X-ray, laboratory and anesthetists' services in the hospital if and when conditions warrant."

It became apparent approximately one year ago, April 1955, that in the opinion of the Medical Service of the District of Columbia conditions were such as to warrant expansion of the plan and at the same time to increase the income limits to a higher figure. In addition, there would be an adjustment in the fee schedules to result in expenditure by Medical Service of an additional 10 per cent in the total money paid to physicians. This in no way was interpreted as a 10 per cent over-all rise in all fees nor in a lump sum payment of 10 per cent to each physician based on the amount paid to him personally by Medical Service during the calendar year.

In attempting to set up fee schedules not now in existence and to adjust prevailing schedules, Medical Service contacted those groups already having fee schedule committees. In addition, they requested the Medical Society of the District of Columbia to appoint advisory committees in internal medicine, general practice, and pediatrics. This was done. It was apparent that no survey of fees for these latter categories was available and the Committee on Medical Care undertook this study. The results of this survey have been made available to the appropriate committees for their study and use.

Following the special meeting in December 1955 of Participating Physicians of Medical Service, and again following the recent mail ballot and covering letter regarding the raising of fees and income ceilings, as well as expansion of the Plan, it was clearly seen that a conflict was developing within the medical profession in this geographical area. The telephone calls, personal contacts and letters forced the Committee on Medical Care to the realization that: first, there existed a lack of understanding on the part of many physicians regarding Medical Service in particular and voluntary prepayment plans in general; and second, there existed grave doubts in the minds of many physicians as to the present plan of Medical Service and the future course one might expect it to take.

Due to the controversy, which has at times been bitter, this Committee voted to present the facts regarding Blue Shield Plans and Medical Service in particular to the Medical Society of the District of Columbia on an educational basis only for the sole benefit of the members.

The Committee would like to point out that all information presented has been obtained from outside sources and has not been obtained from Medical Service or any other Blue Shield Plan except for detailed fee schedules which have of necessity been obtained from the individual plans concerned.

It is very difficult to compare prepayment plans, as no two are alike in coverage, but an attempt has been made to show the trend in Blue Shield Plans within the continental United States. For purposes of this report only Plans which are approved by Medical Society action were surveyed in general and 6 specific Plans were studied in detail.

A total of 75 Medical Society-approved Plans are functioning in the United States. Of these Plans 5 are service plans, 20 are indemnity plans, and 52 are combined indemnity and service plans. (Two are listed as both indemnity and combined, hence the total of 77.) Before going further let me say that a service plan guarantees medical service for the stated fee while an indemnity plan pays cash toward the total fee charged. Thus it is seen that 6.6 per cent are service plans, 26.6 per cent are indemnity plans, and 66.8 per cent are combined service and indemnity plans.

As regards income ceilings in these 75 Plans, there are 24, or 32 per cent, which have no income limits, and there are 51 Plans, or 68 per cent, which have limits. The range of income ceilings is extreme, and varies from $1,500 to $8,000 for an individual contract, and from $2,400 to $8,000 for a family contract. Of the 51 Plans having income ceilings, 49, or 96.04 per cent, have family contract ceilings of $6,000 or below. Of the 51 Plans, 29, or 56.8 per cent, have family income limits of $4,000 or below.

There are in operation among the 75 Plans 14 which operate a dual plan with separate income ceilings for each plan. Obviously fees paid vary with the plan carried.

Of the 75 Plans, 64, or 85.2 per cent, offer medical coverage in some form. This is usually in the form of an indorsement or combined surgical-medical contract and carries an increased premium. Of the 64 Plans offering medical payments, 23 begin payments after the third day of hospitalization and 5 begin after either the first or second day. The remainder are statistically of no value as they range from $10.00 the first day to a yearly indemnity.

The other services offered by the Plans vary so widely that no definitive study can be carried out. Some plans cover anesthesia, others radioactive isotopes and not anesthesia, and similar types of variance.

Before going to the 6 Plans more closely studied, it was decided that, since the Federal Government was the largest single industry here, the average income of the Federal employee should be determined for the years 1947 and 1955. This information was obtained from the Civil Service Commission, and shows that as of June 30, 1947 the average Federal worker's income was $2,839, while on June 30, 1955 it was $4,416, or a rise of 57.2 per cent in 8 years. The reason for using this income rather than the average median income for the District of Columbia will become apparent later. For the purposes of comparative study 6 Plans existing in areas of near comparable income were selected. These are (1) Massachusetts Medical Service, (2) Medical-Surgical Plan of New Jersey, (3) Milwaukee Plan, (4) United Medical Service of New York, (5) Medical Service of the District of Columbia, and (6) the California Physicians Service. These Plans are all combination indemnity and service prepayment plans.

Of these 6 Plans, 2 offer dual plans. These are the Massachusetts Medical Service and the California Physicians Service. For this discussion the lower income plan, Plan A, will be dropped from consideration as we are attempting to outline plans with income limits near the local level of $4,000 a single contract and $6,000 a family, as approved by a recent vote of the Participating Physicians of Medical Service.

It was believed wise to cover each plan separately rather than together for each item.

Massachusetts Medical Service, Plan B, has income ceilings of $5,000 for both single and family contracts. It is the opinion of the Executive Director of this plan that about 80 per cent of the wage-earning population in that state is under-income in terms of this $5,000 figure. The surgical fee range is from $10.00 to $300.00. Medical coverage is on an in-hospital basis and pays as follows: $10.00 for the first day and $5.00 per day after that. Additional payment is allowed up to $25.00 for critical illness requiring extra visits or prolonged attendance during the first days. The length of coverage is not stated.

Medical-Surgical Plan of New Jersey has of recent date raised the income ceilings to $5,000 a single contract and $7,500 for a family contract. Their new schedule of fees is not yet available but they state there will be selective increases over the old surgical schedule, which showed a maximum of $300. The medical coverage under the old schedule gave $10.00 for the first day and $5.00 a day after that up to 21 days. Critical cases or those requiring prolonged attendance during the first 48 hours are eligible for additional benefits up to $35.00.

Surgical Care of Milwaukee is now developing a program with the income limits of $3,600 for a single contract and $6,000 for a family one. It is the opinion of the plan that these new ceilings will cover about 68 per cent of their subscribers. The new fee schedule has not been developed. The old fee schedule for a $4,000 family income ranged from $5.00 to $300.00 in surgery. Medical coverage was on a schedule which began payment after the third day at the rate of $5.00 a day up to the eleventh day and then $3.00 a day up to 70 days. One consultation was allowed a year.

United Medical Service of New York is now writing contracts of $4,000 an individual and $6,000 a family income. Their schedule will show a 20 per cent increase in surgical fees for each unit of $1,000 the ceiling is raised from the old ceilings of $2,500 and $4,000. Medical coverage is complex. They pay, under the old schedule, $4.00 a visit for 48 hours with a maximum of 2 visits a day, then $4.00 a day for 19 days, and then $14.00 a week up to 112 days. An indemnity of $4.00 a house visit and $3.00 an office visit limited to one visit a day and 30 visits a year is also covered. Ten dollars is paid for consultation at the rate of 1 consultation for each disability.

These fees are to increase 25 per cent per unit of $1,000 increase in ceiling.

Medical Service of the District of Columbia has newly approved ceilings of $4,000 and $6,000 for individual and family contracts, respectively. The present surgical range in fees is from $5.00 to $250.00. Selective increases are to be expected. Medical coverage as such is not written although this is in the developmental stage. A Medical Pilot Plan for in-hospital care and limited to 5 per cent of the enrollment has been authorized since 1952. Study of the data obtained from this plan is of no benefit except to show that it was overpriced. This has been remedied in subsequent contract agreements. Medical fees have been on the basis of $4.00 a day after the first 3 days. Proposals for expansion of the plan are under consideration by the Board of Trustees of the Plan.

California Physicians Service has income ceilings of $3,600 and $6,000 in its Plan B. The surgical fee range is $5.00 to $400.00. Medical coverage is offered and covers such items as office, home and hospital calls, complete history and physical examinations, mileage fees, and other factors too numerous to report at this time.

No attempt has been made in the interest of a coherent presentation to show or compare here laboratory, X-ray, anesthesia or catastrophic illness benefits, although such data are in the hands of the Committee.

It has been found impossible to study in a comparative fashion the premiums charged by any of these 6 Plans. The items covered are too diverse in these Plans to break it down to an equitable point. The range of premiums charged for family contracts in these 6 is from $2.80 in Milwaukee on the old $4,000 schedule to $7.70 in California. Medical Service premium is $3.20.

The only possible ground on which these plans may be compared is in specified operative procedures, and 11 of the more common surgical operations have been compared to determine the fee paid. This will be based on the fee paid by Medical Service of the District of Columbia and will be designated as above, below or the same as the local fees. For one Plan, that of New Jersey, there is no fee schedule available and this reduced the total of compared Plans to 5.

The operations are: *appendectomy:* 4 Plans are above local fees; *subtotal gastrectomy:* 2 Plans are above, 1 the same and 1 below local fees; *resection of the colon:* 3 Plans are above and 1 the same as local fees; *radical mastectomy:* 3 Plans are above and 1 the same as local fees; *cholecystectomy:* 3 Plans are above, and 1 the same as locally; *subtotal thyroidectomy:* 3 Plans are above and 1 below Medical Service fees; *adenoma of the thyroid:* 2 Plans are above and 2 Plans do not specify any fee for this excision; *splenectomy:* 2 Plans are above and 2 below local payments; *inguinal herniorrhaphy:* 3 Plans are above and 1 the same as local fees; *parotid tumors:* 3 Plans are above and 1 does not specify a fee; hemorrhoidectomy: 3 Plans are above and 1 the same as Medical Service.

With the above data compiled, the original aims and objectives of Medical Service were reviewed from the files of the Medical Society for 1946 and a letter was addressed to the Board of Trustees of Medical Service requesting a statement as to the aims and purposes of the present Board of that corporation. In reply they reaffirmed the adherence of Medical Service to the original aims and pointed out that although changes had taken place in the program it was felt that these changes were inevitable and were in conformity with the original aims as adopted by the Medical Society in setting up this Plan.

In further reviewing the situation it was felt by this Committee on Medical Care that some of the pertinent facts regarding Medical Service should be brought out. Medical Service of the District of Columbia is an independent corporation whose business is transacted by a Board of Trustees composed of 16 members, of which 7 are practicing physicians from the District of Columbia. These members are nominated and elected from the Medical Society for a 3-year term.

The Participating Physicians are those physicians who have signed contracts with the corporation agreeing to furnish medical services under the terms agreed upon between Medical Service and the physicians. Participating Physicians must approve by vote any change in income ceilings or fee schedules, but determination of benefits rendered the subscribers rests with the Board of Trustees. The Participating Physician has the opportunity of making his wishes known at the annual meeting in the spring of each year or at any special meetings called. It must be pointed out at this time that when Medical

Service was originated it was not set up to care for the lower-income groups alone, but was conceived as a plan to help persons of low- and moderate-income obtain medical care. It was suggested in the beginning that if the truly low-income groups were to be covered that contracts be arranged between Medical Service and the D. C. Health Department whereby all persons would become subscribers. This suggestion has not been renewed.

When the question of the trend of Blue Shield Plans in this country is raised, it is possible from statistical data and correspondence to draw certain conclusions: First, the Blue Shield Plans are approaching a uniformity of income levels as related to the economic level of their geographical location; second, the Blue Shield Plans are in competition with commercial insurance plans for group coverage; third, the Blue Shield Plans are attempting to gain flexibility to meet any counter demands made by labor union and Government sources for medical services.

It is not the function of the Committee on Medical Care to do other than present the results of this study for the guidance of the members of the Society, but it is of utmost importance that each member realize that these changes which are taking place are part of a pattern. The medical profession has taken the lead in voluntary prepayment medical care and it is up to the profession to choose its own course wisely and well and to determine from studies such as these wherein lies the road which will be of greatest benefit to the patient and physician alike.

C. WILLARD CAMALIER, JR., M.D., *Chairman*

ADDITIONAL BENEFITS FOR GROUP HOSPITALIZATION SUBSCRIBERS

Effective with hospital admissions on and after March 1, 1956, additional benefits were made available to subscribers enrolled under the standard Hospital Service Contract at no additional charge.

Although the cost of hospital care has continued to increase steadily, Group Hospitalization's favorable experience has largely offset the increase. This, together with the use of sound underwriting principles and careful management, has enabled GHI to provide greater benefits when they are needed most. The changes will apply to all of the more than 650,000 subscribers except those enrolled under the Preferred Hospital Service Contract and to subscribers in certain experience rated groups.

A list of the additional benefits available under the Revised Standard Contract follows:

Benefit Days. The number of full service benefit days will be increased to 31 days each hospital confinement for those conditions for which 21 days have heretofore been available.

When a subscriber is admitted to a local hospital that participates in the Plan, his Hospital Service Contract will now offer:

31 full benefit days for each hospital confinement, during which the following services are covered, regardless of the hospital's charge:

1. Semi-private room* (accommodations for 2, 3 or 4 persons)
2. Meals, including special diets
3. General nursing service
4. All drugs and medicines listed in the official formularies
5. First urinalysis and complete blood count
6. Operating room
7. Cystoscopic room
8. Oxygen
9. Use of equipment (as customarily provided by the hospital) for administering oxygen
10. Dressings
11. Plaster casts
12. Sterile tray service
13. Intravenous solutions and injections
14. Sera (except blood and blood plasma)
15. Analgesic care
16. Recovery room

Partial Benefit Days. The allowance for the 180 partial benefit days has been increased from $5 a day to $10 a day.

Obstetrical Benefits. Participants eligible for obstetrical benefits under a Standard Family Contract will receive: for any one pregnancy, the greater of

---

* If a participant occupies a private room, by choice or because of his condition, he will receive a credit of $10 a day toward the hospital's charge for the room occupied. The other services listed above will be available on the same basis as they would be to a semi-private room patient.

(1) $10 a day for a maximum of 8 days, or (2) a minimum of $50, but not to exceed the hospital's charge. Formerly, the Plan provided an allowance of $9 a day for a maximum of 8 days.

As heretofore, full service benefits will be provided for cesarean deliveries, termination of ectopic pregnancies, and miscarriage; but for a maximum of 31 days instead of 21 days for any one pregnancy—an increase of 10 benefit days.

Out-of-area Benefits. When subscribers are admitted to out-of-area hospitals that participate in the Blue Cross Inter-Plan Service Benefit Agreement, they will receive the benefits of that hospital's Blue Cross Plan for up to 31 days instead of 21 days. Also, if more than 31 days of care are required, the Plan will provide an allowance of $10 a day for as many as 180 partial benefit days—a new out-of-area benefit.

Non-participating Hospital Benefits. When a participant is admitted to an accredited general hospital that does not take part in the Blue Cross Inter-Plan Service Benefit Agreement, the Revised Contract will provide cash allowances that range from a maximum of $21 for the first day of hospital care to a maximum of $394 for up to 31 days—a maximum increase of $120. If additional care is required, the Plan will provide an allowance of $10 a day for up to 180 partial benefit days for each confinement. This is a new non-participating hospital benefit.

Multiple Admissions. The Revised Contract provides for renewal of the subscriber's 31 full benefit and 180 partial benefit days without regard to time lapse if readmission is for an unrelated condition. Previously, more than 90 days had to elapse between hospital admissions in order to renew the subscriber's eligibility for the full number of benefit days. After 90 days have elapsed, benefit days are fully renewed regardless of the condition for which the subscriber is readmitted.

There has been no change with respect to (1) limitations on the number of days of care for tonsillectomies and adenoidectomies; pulmonary tuberculosis, and mental or nervous disorders; (2) waiting periods; and (3) conditions for which benefits are not available. However, changes have been made in the interest of clarifying the language and the intent of certain provisions of the Contract.

There has been no change in the benefits offered by the Surgical Service Plan of Medical Service of the District of Columbia.

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional current books which, in their opinion, merit comment.

Your Blood Pressure and How to Live With It. William A. Brams, M.D. Illustrations by Hertha Furth. Price, $2.95. Pp. 160. Philadelphia: Lippincott, 1956.

Four Billion Dimes. Victor Cohn, *Minneapolis Star and Tribune.* Pp. 134, illustrated. New York: National Foundation for Infantile Paralysis, 1956.

On the Nature of Man—An Essay in Primitive Philosophy. Dagobert D. Runes. Price, $3.00. Pp. 105. New York: Philosophical Library, 1956.

Pathologic Physiology—Mechanisms of Disease, 2nd ed. Edited by William A. Sodeman, M.D., F.A.C.P., Professor of Medicine and Chairman of the Department of Medicine, School of Medicine, University of Missouri, Columbia, Missouri. Twenty-nine contributors. Price, $13.00. Pp. 963, with 173 illustrations. Philadelphia: Saunders, 1956.

Handbook of Toxicology. Volume I: Acute Toxicities of Solids, Liquids and Gases to Laboratory Animals. Edited by William S. Spector. Prepared under the Direction of the Committee on the Handbook of Biological Data, Division of Biology and Agriculture, The National Academy of Sciences, The National Research Council. Price, paper, $7.00. Pp. 408. Philadelphia: Saunders, 1956.

Life Stress and Essential Hypertension—A Study of Circulatory Adjustments in Man. Stewart Wolf, M.D., Professor and Head, Department of Medicine, University of Oklahoma School of Medicine; Supervisor of Clinical Activities, Oklahoma Medical Research Foundation; Philippe V. Cardon, Jr., M.D., Senior Assistant Surgeon (R), USPHS, National Institute of Mental Health, National Institutes of Health, Bethesda, Md.; Instructor in Medicine, Georgetown University School of Medicine; Edward M. Shepard, M.D., Instructor in Medicine, Cornell University Medical College; Assistant Attending Physician, New York Hospital; and Harold G. Wolff, M.D., Professor of Medicine (Neurology), Cornell University Medical College; Attending Physician, New York Hospital. Price, $7.50. Pp. 253. Baltimore: Williams & Wilkins, 1955.

On the Lighter Side

Every April there comes a day when the grandmother burial rate of the Nation suddenly rises to astronomical heights, only to descend swiftly and seek its normal level the following day. On this same important day the usual nose-to-the-grindstone boss suddenly remembers a convenient conference to attend immediately after lunch. In the Government services and offices there is a noticeable lack of personnel away on sick leave or annual leave. On Capitol Hill there is not as much noise as usual, and for some reason or other doctors are hard to find.

What is it that causes the grandmothers to be buried at an all-time high—that compels the boss to leave his busy desk—that depletes the Government offices—that makes the Capitol Hill politicians forget their constituents—and doctors to hand a be-back-tomorrow sign on their office doors? The answer is very simple: the Opening Day of the baseball season!

The Opening Day is usually a gala occasion with flags and pennants flapping from every stick and pole in the stadium. Multicolored bunting is draped lavishly from every box on both tiers, and the perennial Goldman's Band is conspicuously present in the lower grandstand. The hubbub and buzzing of the crowd, as it streams into the park, filling every aisle, are drowned out only by the raucous cries of the white-coated peanut man, the soft-drink man, the ice-cream man, the cigar-cigarette man, and the scorecard vendor. The stadium is agog with the relaxed excitement of an impending event, that moment when the gates open and the long black limousines of the Presidential party roll into the ball park. A pandemonium of handclapping accompanies the procession and continues until the smiling and waving President takes his seat. (I was present at one opening game when a controversial President received little or no greeting when he came into the park, and the studied silence of the thousands proved to be very embarrassing.)

Amongst all this noise and pageantry there is one official member of the Washington Baseball Club who is either quietly sitting in his reserved seat chewing on his ever-present cigar or who is hustling down into the bowels of the stadium to do his mysterious incantations to those who need them. The team physician, our own Dr. George A. Resta, eminent surgeon and duckpin bowler par excellence, is present here, there, and everywhere when he is on duty at the ball park.

Baseball players are husky, healthy, well-trained, and well-conditioned athletes who, unfortunately, are subject to the same aches, pains, pulled muscles and sprained joints as the ordinary human being. And once they sustain an injury they take just as long to recover as you or I. However, it is Dr. Resta's job to see to it that the injured player is back on the playing field as soon as it is physically possible.

Dr. Resta's work begins during spring training. He must give each and every player, veteran and rookie alike, a complete physical examination. When the team returns home to Washington and the regular league schedule begins, Dr. Resta must be present at every game (he's the team's number one rooter) and he must be concerned professionally with every possible injury that might befall this expensive chattel called a ballplayer.

Usually there are no serious injuries that present themselves with regularity to tax Dr. Resta's well known skill, but there are enough of the minor occupational disabilities, such as sprains, twisted joints, skin-scraping bruises, cuts, back and arm injuries, and phalange fractures to keep Dr. Resta busy both during and between ball games, aided and abetted by "Doc" Lentz, the club trainer.

Dr. Resta has another important professional duty to perform during the ball game, namely, to see and give emergency treatment to any ball fan who might need the services of a physician. If the person needs only a few moments of peace and quiet there is a well fitted rest room under the stadium; however, if the condition seems more serious, Dr. Resta endeavors to get the ill person out of the ball park and to proper medical facilities as soon as possible.

So—if you happen to phone Dr. Resta at his home or office on a day or night that the Washington Baseball Club is in town in active competition, don't expect to get him, because he is out at the ball park chewing his ever-present cigar, sitting quietly enjoying the game.

J. Earl Kadan, M.D.

News and Personals

MEETINGS—Past and Future

The Annual Outing of the Louis Mackall Medical Society will be held on Wednesday, May 9, at the Kenwood Country Club. Golf will be played in the afternoon, with Dr. H. Franklin Kreuzburg in charge. Cocktails will be served at 6:30 p.m., and dinner at 8 o'clock. Dr. Hilbert S. Sabin, retiring President, will preside at the dinner.

Dr. Eugene J. McDonald is General Chairman of the day's activities; he will be assisted by Drs. Darrell C. Crain, James J. McFarland, Charles P. Ryland, and James P. Scanlon.

The Washington Gynecological Society will hold its Annual Dinner for members and guests at the Columbia Country Club, May 16, at 6:30 p.m.

A Physicians Institute on Alcoholism was presented in the Medical Society's auditorium, March 9 and 10, under the sponsorship of The National States Conference on Alcoholism, through a grant from the U. S. Public Health Service. Speakers were present from Walter Reed Army Hospital, the U. S. Naval Hospital, the National Institutes of Health, and from Boston, New York, and other cities.

Several members of the District Medical Society took part in the Institute. Dr. Anthony Zappala was Chairman of the morning session, March 9, which concerned Motivation of the Alcoholic for Therapy. Dr. Zappala is Chief of the Alcoholic Rehabilitation Division of the D. C. Department of Public Health. Dr. Leopold E. Wexberg, Chief of the Mental Health Division, D. C. Department of Public Health, discussed "The Community Clinic," and Dr. Eleanor E. Short, Assistant Chief of the Alcoholic Rehabilitation Division, took part in the general discussion.

Drs. Earl H. Mitchell, Joseph F. Fazekas, and Sylvan A. Steiner participated in the afternoon session, which was devoted to New Drug Adjuncts in the Treatment of Alcoholism. Dr. Mitchell, who is Chairman of the Medical Society's Subcommittee on Alcoholism, presided and participated in the general discussion. Dr. Fazekas, Chief of Staff of the D. C. General Hospital, presented a paper on "Selective Symptomatic Effects of Pharmacological Agents in Alcohol Withdrawal Syndromes." Dr. Sylvan A. Steiner, of the Alcoholic Rehabilitation Division, participated in the discussion period.

Dr. Robert C. Burnham was Chairman and discussant for the morning session, March 10, which dealt with The Psychoanalytic Therapy of Alcoholism. Dr. Burnham is a member of the Committee on Alcoholism of the Washington Psychiatric Society.

The Washington Psychiatric Society met, February 24, in the auditorium of the District Medical Society. The guest speaker was Dr. Franz Reichsman, of the Rochester University School of Medicine, who spoke on "The Experimental Production of Depression in an Infant: A Contribution to the Problem of Depression." Discussion of his paper was led by Drs. Reginald S. Lourie and Leon Yochelson.

A scientific meeting of the Society's Committee on Child Psychiatry was held, March 2, at the Hillcrest Children's Center. Dr. William Stark spoke on the subject, "The Integration of the Emotionally Disturbed Child in the Normal School Setting."

The Medical Society's **Section on General Practice** met in the Medical Society's building, March 27, to hear Inspector John Winters, Chief of the Youth Aid Division, D. C. Police Department, talk on "Narcotic Addiction and Sex."

METROPOLITAN AREA SCHEDULE OF MEETINGS

Organization/Institution	April 1956	May 1956
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA	President's Night Apr. 19	Business Meeting May 2
WALTER REED ARMY MEDICAL CENTER Monthly Medical Meetings	Apr. 19	May 24
NAVAL MEDICAL CENTER Guest Lecture Series	Apr. 26	—

The Scientific Council of the Washington Heart Association presented the following program, February 20, at Georgetown University School of Medicine:

"Restenosis of the Mitral Valve," Dr. W. Proctor Harvey

"Current Trends in the Treatment of Hypertension," Dr. Edward Freis

"Studies of the Circulation Using a Mechanical Heart," Dr. John C. Rose

"Aortic Insufficiency and Rheumatic Spondylitis," Dr. Donald P. Schilder

"Austin-Flint Murmur," Dr. Jack P. Segal

"Recent Advances in Aortic Valve Surgery," Dr. Charles A. Hufnagel

Dr. Harvey was moderator for the meeting. All the participants are members of the staff of Georgetown University School of Medicine.

A postgraduate course for general practitioners was sponsored jointly by the medical staff of Arlington Hospital and the Virginia Academy of General Practice in January and February. Beginning January 25, the following series of lectures was given at Arlington Hospital:

January 25: "Albuminuria," Dr. George E. Schreiner
February 1: "Use of Newer Drugs," Dr. Louis Fauteux, Jr.
February 8: "Slowly Responding Respiratory Infections," Dr. Sol Katz
February 15: "Office Management of Diabetes," Dr. James Moss
February 22: "Diagnosis and Treatment of Cardiac Emergencies," Dr. W. Proctor Harvey
February 29: "Newer Laboratory Procedures," Dr. William D. Dolan

All the speakers except Drs. Fauteux and Moss are members of the District Medical Society.

The District of Columbia Society for Crippled Children held its annual Spring Meeting, consisting of Clinic, School and Therapy, and Lectures, March 22, 23 and 24. Dr. Winthrop M. Phelps, of Baltimore, consultant in cerebral palsy to the Society, conducted the clinic. Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, presided at the morning session, March 24, which was held in the Medical Society's auditorium. Dr. Reginald Lourie, Director of Psychiatry, Children's Hospital, and Dr. Margaret M. Nicholson, Associate in Pediatrics, George Washington University School of Medicine, were among the discussants at the Saturday meetings.

The medical staff of the Alexandria Hospital sponsored its second **Annual Series of Mid-day Lectures** on 5 consecutive Tuesdays, beginning January 31. They were held at Carter Hall in the Hospital. The speakers, all members of the District Medical Society, and their topics were:

January 31: "Therapy and Anxiety State," Dr. Leon Yochelson
February 7: "Therapy of Heart Disease," Dr. John M. Evans
February 14: "Treatment of the Geriatric Patient," Dr. Jack Kleh
February 21: "Therapy of Acute Lung Disease," Dr. Sol Katz
February 28: "Treatment of Peripheral Vascular Disease," Dr. Andrew G. Prandoni

The Arlington County Medical Society elected officers at its business meeting, December 15, which was held at the Washington Golf and Country Club. The new officers are:

Dr. Hermann F. Diamant, *President;* Dr. Stephen J. Sheehy, *Vice President;* Dr. Thomas A. McGavin, *Secretary;* Dr. Clifford E. Bagley, *Treasurer;* and Dr. Harry Clark Bates, *member-at-large.*

Dr. Bagley is an Affiliate member of the D. C. Medical Society and Drs. Sheehy and Bates are Associate members.

During the Medical Society's Fifth Midwinter Seminar, **the first closed-circuit medical television program** to be held in the Medical Society's auditorium was presented to physicians on Wednesday evening, February 15. It was the second of a series of live telecasts from Tufts University School of Medicine and the New England Medical Center in Boston. Discussion during the Clinical Grand Rounds pertained to the cardiac patient in stress situations such as work, surgery and pregnancy. Several patients were interviewed during the Rounds.

Participating in the telecast were the following physicians: Drs. Paul Dudley White, C. Sidney Burwell, Samuel A. Levine and Merrill C. Sosman, of Harvard Medical School, and Drs. Benjamin Etsten and Samuel Proger, of Tufts University School of Medicine.

Probably the largest audience ever assembled in the Medical Society's auditorium was present. Every seat was filled, physicians were standing in the back of the auditorium, and a number were turned away. President W. Ross Morris, who presided at the meeting, predicted that similar closed-circuit programs would be used more and more in the medical education of both students and physicians.

The presentation of the telecast required a special cable and receiving equipment, which were supplied by the Upjohn Company, which brought the program to Washington.

GENERAL NEWS

The Executive Board of the Medical Society of the District of Columbia held its regular meeting, February 27, 1956. The Board voted to add 2 new members to the Committee on Emergency Medical Service, Dr. Richard L. Whelton and Dr. James E. Fitzgerald.

Inspector Richard A. ("Dick") Mansfield was nominated for the Dr. C. C. Criss Award, which is given annually by Mutual of Omaha to someone who has made an outstanding contribution to public health and/or safety. For the past 13 years, "Dick" Mansfield has worked on traffic safety promotion under the sponsorship of the *Evening Star*. He started this work under his own volition in 1922 and is considered the foremost public health educator in the field of traffic safety for children. It was reported in 1951 that Washington had reduced child traffic fatalities by 75 per cent while almost doubling its population.

The Silver Spring Academy of Medicine was reactivated at a meeting of a group of physicians of the Silver Spring area, January 20. Dr. Peter Noble Lombard, an Affiliate member of the D. C. Medical Society, was elected President.

Dr. Lombard stated that the purpose of the Academy shall be "to advance medical knowledge of the members, to promote social and professional harmony within the Academy, and to establish effective relations with other organizations and with the general public."

Other officers elected were: Dr. Blaine Eig, Vice President, and Dr. Charles Warfield, Secretary, both Associate members of the D. C. Medical Society.

Construction of a **new psychiatric building** for the District of Columbia General Hospital was begun, February 29, when Colonel Thaddeus Nosek, Assistant Engineer Commissioner, turned the first spade of earth. The new structure, which will have a 205-bed capacity, will be built at a cost of $2,007,000 by the Gunnell Construction Company, Inc. Dr. John D. Schultz, Chief of the Hospital's Psychiatry Department, presented Colonel Nosek with a symbolic spade which bore an inscription done by patients in the Psychiatric Division.

Administrators for the new **Washington Hospital Center,** now under construction on the grounds of the Old Soldiers Home, were selected by its Board of Trustees, February 28. The Center is a corporation formed by a merger of Emergency, Episcopal Eye, Ear and Throat, and Garfield Memorial Hospitals.

Dr. Warwick T. Brown, Administrator of Emergency Hospital, has been selected as the first Administrator for the Center. Mr. Richard M. Loughery, Administrator of Garfield Hospital, will be Deputy Administrator. Commissioner Samuel Spencer was elected to the newly created office of Executive Vice President.

PERSONALS

The George Washington University Medical Society met for its 30th Annual Alumni Reunion and Banquet in the Terrace Room of the Shoreham Hotel, February 18. **Dr. Robert R. Montgomery,** President of the Society, presided at the dinner and program. The guest speaker was Dr. Harry F. Dowling, an alumnus of George Washington University, a former member of its faculty, and a former member of the D. C. Medical Society. Dr. Dowling is now Professor of Medicine at the University of Illinois College of Medicine in Chicago. He spoke on "The Challenge of the Future."

Dr. Stubbs

The highlight of each of these banquets is the presentation of an Award of Merit in recognition of the recipient's scientific and academic achievements and his services to the community. It is presented to an alumnus of the University by secret ballot by Society members. This year the recipient was **Dr. Donald Stubbs,** anesthetist, who has had a distinguished career as physician, educator and executive. He is President of Medical Service of the District of Columbia, an office he has held for the past four years. He is also Blue Shield Commissioner for District V, which includes Kentucky, West Virginia, Virginia, Maryland, North and South Carolina, and the District of Columbia. He is Chairman of the Government Relations Committee of the National Blue Shield Commission.

A graduate of George Washington University School of Medicine (1932), Dr. Stubbs has specialized in anesthesiology, with special concern for shock, resuscitation, pain and safety in that field. He represents his specialty on the Editorial Board of the Medical Annals. He taught surgery at both George Washington and Georgetown Universities, at the latter between 1934 and 1938 and at George Washington from 1938 to 1947, when he was appointed Assistant Clinical Professor of Anesthesiology. He is head of anesthesia at Doctors Hospital and is on the staff of most of the local hospitals. He recently succeeded the late Dr. Oscar B. Hunter as Chairman of the Executive and Teaching Staff of Doctors Hospital.

Dr. Stubbs was unable to be present to receive the award, and it was accepted for him by his daughter, Peggy Ann, who is a premedical student at George Washington University. Dr. and Mrs. Stubbs live at 305 Mansion Drive, Alexandria. They also have three young sons, Kendon, Alan and Edmund.

Dr. Bernard J. Michela has been named Medical Director of the Davis Memorial Goodwill Industries, which opened a new rehabilitation center, April 1, at 1229 Twentieth Street, N.W. Mr. W. Harold Snape, Executive Director of the Goodwill Industries, announced that Miss Marie Yaryan, of Des Moines, Iowa, will be Coördinator of the new center.

Dr. Michela is an instructor in the Department of Physical Medicine at Georgetown University School of Medicine and a consultant in physical medicine and rehabilitation to the Bureau of Maternal and Child Welfare in the D. C. Department of Health. He will serve the center in a part-time capacity as administrator of all medical procedures. The rehabilitation center is expected to serve between 50 and 75 handicapped persons daily.

Dr. John A. Kennedy has been appointed Director of the Surgical Service in the Veterans Administration Central Office in Washington, D. C. He has served in VA hospitals at Palo Alto and San Francisco, California; Dayton, Ohio; Huntington, West Virginia, and Mt. Alto in Washington, D. C. During World War II, as Lieutenant Commander in the Navy, he served in the South Pacific theater.

From 1946 to 1949, Dr. Kennedy was engaged in private practice in Washington. He returned to the VA in 1949 and has been in the office of the Director of Surgical Service since that time. He is an Associate member of the District Medical Society.

At the request of the Honorable Harry Shapiro, Secretary of Welfare, Commonwealth of Pennsylvania, **Dr. Addison M. Duval,** Assistant Superintendent of St. Elizabeths Hospital, will inspect and make recommendations for improving the functioning of the Farview State Hospital, a hospital for the criminally insane in the state of Pennsylvania. Farview is located at Weymart in Wayne County.

Several members of the District Medical Society took part in the **24th Annual Postgraduate Clinic of the District of Columbia Dental Society,** which was held at the Shoreham Hotel, March 11–14. Drs. Daniel F. Lynch and Harold W. Krogh, Associate members of the District Medical Society, held Table Clinics, March 14. Dr. Lynch, Past President of the American Dental Association, led discussion on "Conservative Treatment of Large Maxillary Cysts." "Intravenous Anesthesia in Office Practice" was the topic for discussion at Dr. Krogh's Clinic.

Dr. John A. Reed was moderator for a panel discussion, March 12, on The Health of the Dentist. Discussors, representing various specialties, were: Dr. J. Blaine Harrell (Surgery), Dr. Darrell C. Crain (Arthritis), Dr. J. Burton Glenn (Cardiovascular Diseases), Dr. Maurice Mensh (Gastrointestinal Diseases), Dr. Robert H. Groh (Psychiatry), and Dr. Tomas Cajigas (Pathology).

Dr. William P. Herbst was invited to address faculty and students of the Graduate Medical School of the University of Pennsylvania, in Philadelphia, March 15. The subject of his address was "The Metabolic Aspects of the Mechanism of Inflammation and Stress as Applied to the Management of Severe Infectious Inflammatory Problems in Surgery."

Dr. Frank W. Konzelmann, Chief Pathologist at Emergency Hospital, participated in a Clinicopathological Conference in Erie, Pa., February 7. In the evening he was invited to address the Erie County Medical Society on the subject of "Liver Function Tests."

Dr. Konzelmann attended a meeting of the planning committee which is arranging for the International Conference on Cytology, to be held in October in Chicago. The committee met in Chicago, February 12.

On January 11, Dr. Konzelmann addressed a staff meeting at Annapolis Hospital in Annapolis, Md. He described "The Hazards of Blood Transfusion."

FIFTY-YEAR ALUMNUS OF JOHNS HOPKINS

Dr. E. Hiram Reede, Washington psychiatrist and a Life member of the Medical Society of the District of Columbia, proudly displays a bronze medallion he received in the fall from Johns Hopkins University School of Medicine. The medallion was sent him in commemoration of his graduation from Johns Hopkins in 1902.

Dr. Reede became a member of the District Medical Society in 1904. In 1937–38 he was Vice Chairman of its Executive Committee and Chairman of the Board of Censors. For 10 years, 1905–15, he was on the staff of Howard University School of Medicine, first as Professor of Physical Diagnosis and later as Professor of Pediatrics. He was a member of the faculty of Georgetown University School of Medicine from 1922 to 1927; he joined the staff as Instructor in Neurology and later was appointed Professor of Clinical Psychiatry.

CAT

Dr. Samuel P. Bessman, Associate Professor of Pediatrics, University of Maryland School of Medicine, was one of the speakers at the Seventh Annual Northern Virginia Clinic Day, which was held this year on April 8 at the Wakefield High School in

Arlington, Virginia. All the speakers were faculty members of the University of Maryland. Dr. Bessman read a paper on "Blood Ammonia—A Common Denominator in Coma and Other Allied Conditions." He is an Active member of the D. C. Medical Society.

Dr. R. Lomax Wells, Medical Director of the Chesapeake and Potomac Telephone Companies, represented the District Medical Society at a Conference of Chairmen of Committees on Industrial Health from the state medical societies, which was held in Detroit, January 22, prior to the AMA's Congress on Industrial Health, January 23 and 24. Dr. Wells was elected Vice Chairman of the Conference for 1957.

On February 6, Dr. Wells addressed the Roanoke Academy of Medicine in Roanoke, Virginia, on "Industrial Medicine at the Community Level."

Dr. Wallace M. Yater, Director of the Yater Clinic, was guest lecturer at the Hartford Hospital in Hartford, Conn., March 10. The subject of his address was "Coronary Atherosclerosis."

Dr. Charles D. Shields, Professor of Physical Medicine at Georgetown University School of Medicine, was guest speaker at a meeting of the Fairfax County Medical Society, February 14. Dr. Shields spoke on "Physical Medicine in Rehabilitation."

Dr. Julius Schreiber was elected to the Board of Directors of the National Association for Mental Health in November 1955, and has been reappointed Chairman of its Public Education Committee.

Dr. Preston A. McLendon, Professor of Pediatrics of George Washington University School of Medicine, was invited to speak on "Rooming-In" before the Chicago Pediatric Society, which was held at the Children's Memorial Hospital in Chicago, March 20.

Dr. Harold J. Jeghers, Professor of Medicine, Georgetown University School of Medicine, addressed the Alexandria Medical Society, January 12, on the topic, "The Clinical Significance of the Tongue."

Dr. Virgil T. DeVault, Medical Director of the Department of State, has been appointed a member of the International Executive Council of the International College of Surgeons. Among the other American members is Dr. George F. Lull, Secretary of the American Medical Association.

Dr. Murray M. Copeland, Professor of Oncology at Georgetown University School of Medicine, attended the meeting of the Puerto Rico Chapter of the American College of Surgeons, February 21–29. At the request of the National Cancer Institute, Dr. Copeland inspected the Medical School of Puerto Rico with regard to its program of cancer teaching.

Dr. Howard T. Karsner, Medical Research Advisor to the Surgeon General of the Navy, was elected Chairman of the Advisory Medical Board of the Leonard Wood Memorial for the Eradication of Leprosy, February 25.

The Memorial was established nearly 30 years ago in tribute to General Leonard Wood because of his keen interest in leprosy. Dr. Karsner has been identified with the work of the Memorial for nearly 20 years.

Dr. John R. Cavanagh, Associate Professor of Clinical Medicine, Georgetown University School of Medicine, was an honoree at the sixth annual Awards Luncheon of the Georgetown Alumni Club of Washington, held at the National Press Club, March 16. Dr. Cavanagh was cited for his achievements as a physician and teacher. He graduated from Georgetown University School of Medicine in 1930. During World War II he served in the Medical Corps of the U. S. Navy for more than 3 years; he held the commission of Commander. He is a diplomate of the American Board of Psychiatry and Neurology, a Fellow of the American College of Physicians, and a Special Lecturer in Pastoral Medicine and Psychiatry at Catholic University of America. He is associated in the practice of psychiatry with Dr. Thomas W. Murphy at 1703 Rhode Island Avenue, N.W.

Dr. Farker S. Dorman has earned the degree of Master of Medical Science at the University of Pennsylvania in Philadelphia. Graduation ceremonies were held there, February 20; Chief Justice

Warren, who was present to receive an honorary degree of Doctor of Laws, was the principal speaker.

Dr. Dorman graduated from the University of Maryland in 1947. He is associated in the practice of urology with his father and brother, Drs. H. N. and Parker P. Dorman, at 1302 18th Street, N.W. All three physicians are Active members of the District Medical Society.

Dr. Albert S. Winer gave up his practice more than a year ago and is taking a residency in psychiatry at the University Hospital in Baltimore, Md.

Dr. William F. Kellow, who was stationed at Beale Air Force Base in California as Chief of Medicine when he became a member of the Medical Society of the District of Columbia in 1952, writes that he is now in Chicago and plans to remain there permanently. Dr. Kellow has accepted the post of Assistant Dean of the University of Illinois College of Medicine.

Three resignations of Active members were reported to the Executive Board at its last meeting.

Dr. J. Wayne McFarland, who has been head of the Physical Medicine Department at Washington

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
January 17	Dr. Julius Schreiber	Marriage and Family Life	B'nai B'rith Lodge
January 23	Dr. Julius Schreiber	The Emotional Needs of Children	Garden Nursery Parents Association
February 14	Dr. Fred L. Soper	Eradication of Malaria and Health Conditions around the World	Biological Sciences Group of Special Libraries Association
February 14	Dr. Bernard J. Walsh	Children's Cardiac Problems	Women of the Motion Picture Industry
February 21	Dr. Julius Schreiber	The Psychodynamics of Inter-group Tensions	Charles D. Barrett School Parent - Teachers Association, Alexandria, Va.
February 23	Dr. Leonard A. Scheele	The Widening Reach of Goodwill Industries	Davis Memorial Goodwill Industries
February 23	Dr. Joseph Abrahams	Courtship and Marriage	B'nai B'rith Hillel Foundation
February 27	Dr. Bushnell Smith	Function of the Epilepsy Clinic in the Diagnosis and Treatment of Epilepsy	Ladies Board, Georgetown University Hospital
March 1	Dr. Julius Schreiber	Exploring Emotional Problems of Every-day Living	National Mental Health Films Board Workshop, New York City
March 8	Dr. Julius Schreiber	Common Areas of Marital Discord	B'nai B'rith Hillel Foundation
March 10	Dr. Lois I. Platt	Discussion of film, Breast Self-examination	Indian Ladies Club
March 20	Dr. Dorothy Donley Dowd	The Emotional Needs of Exceptional Children	Northern Virginia Chapter, International Council for Exceptional Children, Arlington, Va.

Sanitarium and Hospital since 1946, will be associated with the School of Tropical and Preventive Medicine of the College of Medical Evangelists in Loma Linda, Calif., for the next two years, after which he expects to return to Washington.

Dr. John W. Martin, Washington dermatologist, has retired from active practice. He resides at 3 Pooks Hill Road, Bethesda, Md.

Dr. James A. Sowers is now practicing surgery in Fresno, California. His address is 425 North Fulton Street.

CORRESPONDENCE

WASHINGTON, D. C., February 3, 1956

TO THE EDITOR:

As a general practitioner may I voice my protest against certain unfair and unprofitable practices re Workmen's Compensation cases. Quite obviously, the general practitioner's problem and point of view differ greatly from that of a colleague principally engaged in treating compensation cases. Relatively speaking, our jurisdiction is limited to emergencies requiring rather limited skills. There never has been any dispute that serious injuries are the domain of the expert. My complaint is that the small claims we process too often are time-consuming and deficit-making nuisances. Being emergencies, we give them priority over nonemergency patients or disrupt normal schedules. Being Workmen's Compensation cases, time-consuming forms must be forwarded to the Commissioner and employer.

When the employer or insurance carrier ignores your small bill, perhaps for a single visit, or delays payment until served several notices, the lesser evil is not to invest more time in prosecuting your just claim. It is cheaper just to forget it.

But a new angle to this expert chiseling by corporations engaged in providing medical care has come to my indignant attention. I processed a minor claim which consumed about 25 minutes in taking history, diagnosis, treatment, and completing the obligatory report. For my 25 minutes, I made a charge of $5.00. After submitting 2 bills at monthly intervals without receiving my check, I wrote a letter to the employer. Under pressure from the employer, 2 weeks later I received a check for $4.00. Refusing to accept this arbitrary discounting of what I believed to be a fair bill, I returned the check without signing the waiver.

In reply to my protest the insurance carrier invited my attention to "Regulations for the Guidance of Physicians Engaged in Practice under the Workmen's Compensation Law." I was intrigued by this proof from the regulations of our own Medical Society that I was ethically obligated to sell my time to an insurance company for less than I charged my own patients. I checked the date of this give-away agreement for the benefit of profit-making insurance companies; Mr. Wiprud said it was negotiated in 1951 and adopted in May, 1952.

If my memory serves me right, things have happened both to the dollar's value and insurance rates since 1952. A case in point is our malpractice insurance. Furthermore, insurance carriers have hiked their rates because "doctor's charges have gone up." It would be a shame to validate this lie by our default. Isn't it time this Medical Society made a fair upward adjustment in a fee schedule negotiated 4 years ago? At least I want to go on record as refusing to serve insurance companies cheaper than my patients.

THOMAS E. MATTINGLY, M.D.

WASHINGTON, D. C., February 27, 1956

TO THE EDITOR:

The Committee on Industrial Medicine of the Medical Society of the District of Columbia is most appreciative of the opportunity afforded it to reply to Dr. Thomas Mattingly's letter directed to you under date of February 3, 1956.

The Committee is cognizant of the changing economic climate relating to medical fees since the fee schedule was revised in 1952. It has taken under advisement the need for study and revision of this schedule.

It should be pointed out that such revision involves many meetings and conferences with individual physicians, representatives of the various specialties, and insurance carriers. It is a matter requiring tact, understanding, and a coöperative spirit among all interested parties. Previous revisions have come only after meticulous attention to details and the judgment of many people,—a matter involving at least a year's work.

The Compensation Commission of the District of Columbia does not provide the local medical profession with a fee schedule as is done in many other jurisdictions. The fee schedule of the Medical Society of the District of Columbia has been provided as a guide for its members and local insurance carriers. It does not have the authority of the law, but it is the product of the considered judgment of many.

The Committee willingly assigns to itself the task of revising the fee schedule and asks only patience, understanding, and coöperation as it pursues this assignment.

Sincerely yours,
R. LOMAX WELLS, M.D.
Chairman, Committee on Industrial Medicine

ROBERT SCOTT LAMB, M.D., F.A.C.S.
(1876–1956)

Dr. Robert Scott Lamb, a Life member of the Medical Society of the District of Columbia and a practicing physician for almost 60 years, died March 4, 1956, at George Washington University Hospital.

Dr. Lamb was a native Washingtonian, born October 15, 1876, the son of Dr. Daniel S. and Mrs. Elizabeth Scott Lamb. His father was a well known physician and writer. His best remembered contribution to the District Medical Society is his history of the Society, which covers the years 1817 to 1909.

After attending Washington schools, Dr. Lamb enrolled at Cornell University, where he received a degree in engineering in 1894. Upon his return to Washington he decided to study medicine under his father, who was an instructor at Howard University School of Medicine for many years. Dr. Robert Lamb received his medical degree from Howard University in 1898.

After two years of practice he was appointed Medical Inspector for the Pennsylvania Railroad with offices in Pennsylvania. Two years later, he returned to Washington and established the practice which was continuous from then until his death. From 1917 he limited his practice to ophthalmology. His offices were located at Stoneleigh Courts for 40 years. He served as ophthalmologist at Emergency, Doctors and D. C. General Hospitals, as consultant to Casualty Hospital, and was formerly Associate Surgeon at Episcopal Eye, Ear and Throat Hospital.

Dr. Lamb was active in many scientific and social organizations. He was a Fellow of the American College of Surgeons, a charter member of the American Academy of Ophthalmology and Otolaryngology, and President Emeritus of the Social Hygiene Society of the District of Columbia. He was a member of the American Medical Association, the Southern Medical Association, and the American Association for the Study of Endocrinology. He was elected to membership in the Medical Association and the Medical Society of the District of Columbia the same year, 1899, and became a Life member of the latter in 1940.

His social organizations included the Sons of the American Revolution, Cornell University Club, and the University Club, where he resided in recent years. He also belonged to the American Civic Association, the Washington Board of Trade, Hiram Lodge No. 10 of the Masons, and the Washington Golf and Country Club.

His wife, Mrs. Sarah Keen Lamb, whom he married in 1901, died in 1942. He is survived by a daughter, Mrs. Eugene M. Lamb, of 4900 16th Street, N.W., and five grandchildren. His son, Robert Keen Lamb, a professor at Massachusetts Institute of Technology, died in 1953.

CHARLES H. KELLEY, B.A., M.D.
(1901–1956)

Dr. Charles H. Kelley, Chief Radiologist at Freedmen's Hospital, died suddenly, January 17, 1956, at the Hospital. His offices were at 1717 U Street, N.W., and his home at 1217 Hamlin Street, N.E.

Dr. Kelley was born in La Grange, Georgia, on September 14, 1901, the son of the late Charles H. Kelley, a school principal, and Mrs. Frances G. Kelley, who survives him. He attended the public schools of La Grange and graduated from Morehouse College in Atlanta, receiving his B.A. degree in 1924. He came to Washington to study medicine at Howard University and received his medical degree in 1929. The following year he interned at Freedmen's Hospital.

Dr. Kelley practiced in Atlanta, Ga., from 1931 to 1936. In preparing for his specialty, he enrolled for postgraduate training in radiology at Columbia University in New York, 1936–37, following which he took a two-year residency in radiology at Provident Hospital, Chicago. In 1939 he was appointed Chief of the Division of Radiology at Freedmen's Hospital and Associate Professor and Chief of the Division of Radiology of Howard University. He was certified by the American Board of Radiology in 1939.

During his college days, Dr. Kelley was an outstanding athlete. He was captain and quarterback of the football squad, captain and catcher for the baseball team, and captain and forward on the basketball team.

He was a Fellow of the American College of Radiology, an Active member of the Medical Society of the District of Columbia since 1953, and a member of the American Medical Association, the Radiological Society of North America, and the Medico-

Chirurgical Society of the District of Columbia. He had contributed a number of articles to *Radiology* and to other scientific journals.

Surviving him, in addition to his mother, are his wife, Mrs. Susie Tate Kelley; a daughter, C. Patricia, a senior at Wellesley College; a sister, Mrs. Juanita Graham, of Washington; and two brothers, William Kelley, of New York City, and Forest Kelley, of Marshall, Texas.

Fight Against Cancer—Klopp

(*Continued from page 195*)

active, but all of these put together could not fill the needs for examination of all persons who could afford to pay no more than the smaller fee charged by these clinics (compared to that which must be charged by the practicing physician, if he is to earn a reasonable living). Therefore, and rightly so, most cancer detection examinations must be and should be purchased by the examinee from the practicing physician at his own office at a reasonable but adequate price. Residents of this area can and should avail themselves of these services, and with their physicians' help they can "fight cancer with a check-up—and a check."

BIBLIOGRAPHY

1. Office of Vital Statistics, District of Columbia: Direct communication.
2. Walske, B. R., Hamilton, J. W., and Kisner, P.: From "benign" polyp to carcinoma. A.M.A. Arch. Surg., 1955, **70**, 318.
3. Hitchcock, C. R., and Sullivan, W. A.: Increasing the survivors of cancer through asymptomatic diagnosis of malignant disease. Surgery, 1956, **39**, 54.
4. Martin, H.: Cancer of the Head and Neck, a monograph. New York: American Cancer Society, 1949.
5. Overholt, R. H., Bougas, J. A., and Woods, F. M.: Surgical treatment of lung cancer found on X-ray survey. New England J. Med., 1955, **252**, 429.

Prevention in Allergy—Seltzer

(*Continued from page 198*)

BIBLIOGRAPHY

1. Ratner, B., Jackson, H. C., and Gruehl, H. L.: Transmission of protein hypersensitiveness from mother to offspring; active sensitization in utero. J. Immunol., 1927, **14**, 303.
2. Glaser, J., and Johnstone, D. E.: Prophylaxis of allergic disease in newborn. J.A.M.A., 1953, **153**, 620.
3. Simon, S. W., Berman, H. I., and Barald, F. C.: Prevention of reactions in intravenous urography (preliminary report). Ohio M. J., 1954, **50**, 247.
4. Simon, S. W., Berman, H. I., and Rosenblum, S. A.: Prevention of reactions in intravenous urography. J. Allergy, 1954, **25**, 395.
5. Marks, M. B.: Climate as an influencing factor in childhood allergy. Ann. Allergy, 1954, **12**, 403.
6. Editorial: Migration for relief from allergies. J.A.M.A., 1954, **154**, 412.

Cybernetic Theory of Aging—Still

(*Continued from page 203*)

BIBLIOGRAPHY

1. Heilbrunn, L. V.: An Outline of General Physiology. Philadelphia: Saunders, 1955.
2. Manual of International List of Causes of Death (Fifth Revision—1938), 4th ed. Washington, D.C.: Government Printing Office, 1940.
3. Wiener, N.: Cybernetics or Control and Communication in the Animal and the Machine. New York: Wiley, 1948.
4. Anderson, W. A. D.: Synopsis of Pathology, 3rd ed. St. Louis: Mosby, 1952.
5. Rockstein, M.: Some aspects of physiological aging in adult worker honey bee. Biol. Bull., 1953, **105**, 154.
6. Andrew, W., and Cardwell, E. W.: Neuronophagia in human cerebral cortex in senility and in pathological conditions. A.M.A. Arch. Path., 1949, **29**, 400.
7. Jarvis, G. A.: Private communication.

Ectodermal Defect with Amastia—Osbourn

(*Continued from page 205*)

BIBLIOGRAPHY

1. Osbourn, R. A.: Congenital ectodermal defect with amastia. J.A.M.A., 1952, **148**, 644.
2. Hutchinson, J.: Congenital absence of hair and mammary glands. Proc. Roy. M. & Chir. Soc., Lon., 1886, **69**, 493.
3. Kiskadden, W. S., Schechtman, A. M., and Brock, C.: Collective review: theories of etiology of congenital deformities. Internat. Abstr. Surg., 1949, **88**, 1; in Surg., Gynec., & Obst., supp., January, 1949.
4. Tendlau, B.: Ueber angeborene und ervorbene atrophia cutis idiopathica. Arch. f. path. Anat., Berl., 1902, **167**, 465.
5. Kaalund-Jørgensen, O., and Christensen, J. F.: Congenital ectodermal dysplasia of anhidrotic type. Acta dermat.-venereol., 1941, **22**, 1.
6. Upshaw, B. Y., and Montgomery, H.: Hereditary anhidrotic ectodermal dysplasia; clinical and pathologic study. A.M.A. Arch. Dermat. & Syph., 1949, **60**, 1170.

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *May*, 1956 NUMBER 5

THE FUNCTIONING CARCINOID TUMOR—A NEW CLINICAL ENTITY

Review of the Clinical Features of the Nonfunctioning and Functioning Carcinoid, Including a Review of Thirty-eight Cases from the Literature*

COLONEL THOMAS W. MATTINGLY
Medical Corps, United States Army; Chief of Cardiology Service, Department of Medicine, Walter Reed Army Hospital, Washington

THESE LITTLE TUMORS of the intestinal tract, initially undifferentiated from carcinomas and later reported as "little cell carcinomas," carcinoids and argentaffinomas, have been a subject of discussion and controversy by pathologists for years. Clinicians and surgeons have also had changing concepts as to the biologic behavior of these intestinal tumors and their clinical importance. In general, they have been considered as silent tumors rarely capable of producing symptoms per se. They have never been appreciated as being important or serious tumors and usually were not considered in the preoperative and/or antemortem diagnosis. Customarily they were regarded as benign, innocent tumors found at the time of surgery or at the autopsy table. For 20 years after Lubarsch[1] (1888) first described these tumors as atypical carcinomas, case reports, appearing chiefly in the German literature, continued to confuse these growths with true carcinomas. Most of the discussion and interest has been related to the histogenesis of these tumors and the features which caused them to behave differently from the ordinary carcinomas.

In 1907 Oberndorfer[2] gave the first good histologic description of this tumor. He pointed out the chromaffinity of the tumor cells and demonstrated doubly refractile bodies in their cytoplasm. He suggested the name "carcinoid" to distinguish this group of tumors from the true carcinoma which they resembled and expressed the belief that they were benign. The American literature continued to confuse and report these lesions as carcinoma of the intestinal tract until 1925, when Forbus[3] again described the cellular and clinical peculiarities of these tumors, pointing out that "the term carcinoma had been erroneously applied to a group of small tumors occurring singly or in numbers in the appendix and small intestine which had a morphological similarity to true carcinoma of these organs." He confirmed the argentaffin character of the cells of the tumor, as originally described by Gosset and Masson,[4] and also adhered to their theory of origin that these tumors arose from the cells of Kultschizky or Schmidt of the crypts of Lieberkühn and that they were in effect tumors of the chromaffin system. He designated these tumors as argentaffin tumors to stress their differentiation from carcinoma.

---

* This is the sixth of a series of comprehensive reference articles on topics of current medical interest prepared by invitation for the MEDICAL ANNALS. It is being published in two parts, of which this is Part I. Part II will appear in the June, 1956 issue.

Today, the official listing in the American literature refers to them as "argentaffinoma," but the original term "carcinoid" is more generally used, especially in the literature of other parts of the world. Forbus[3] likewise stressed the general harmless character of these tumors. He described them as being submucosal and ordinarily confined to the wall of the intestine and only rarely extending into the mesentery and lymph nodes. He was doubtful of distant metastasis and did not believe they ever produced symptoms per se.

This pathologic and clinical concept changed very little for the next 28 years (1925–1953) except that case reports and periodic reviews of the literature attested to an appreciation of increasing incidence of metastasis which at times became widespread and voluminous in size in spite of the small and innocent appearance of the parent or primary tumor. Also, it became apparent during this period that the lesions occurring in the ileum possessed a higher degree of invasiveness, occasionally producing acute and chronic symptoms requiring surgery and even causing death from complications. Gradually it became accepted that all carcinoids were potentially malignant.

In spite of this additional experience, a clinical diagnosis, or even consideration of intestinal carcinoids in a differential diagnosis, was rarely made, and recognition continued to be almost entirely from surgical biopsy or postmortem examination.

During the short period from 1953 to 1956, however, a series of events took place which suddenly focused widespread and renewed interest on the carcinoid tumor. Lembeck[5] in 1953 isolated a substance in large amounts from a carcinoid tumor removed at autopsy which was identified chemically as 5-hydroxytryptamine. This substance was further identified as being identical with vaso-active material called enteramine by Erspamer[6] and serotonin by Rapport.[7] This substance is found in enterochromaffin tissue in man and animals and has been demonstrated by Erspamer[8] to be pharmacologically active on smooth muscle, producing intestinal peristalsis, bronchoconstriction, and varying effects on blood vessels. About this time several independent observers[9–12] reported instances in which patients with intestinal carcinoids with metastasis presented more pronounced intestinal symptoms and more weight loss than with the usual patient with carcinoid. These patients also had peculiar cutaneous vasomotor phenomena over a period of years and often had asthmatic-like attacks and psychotic episodes; valvular lesions of the pulmonary and tricuspid valves of the heart developed. These patients usually died from congestive heart failure. Similar sporadic case reports have appeared in the literature since 1931. The first well described and discussed case was that of Scholte[13] who, after a lengthy discussion, decided that his patient had independent diseases of the intestine, skin, and the cardiovascular system. In subsequent cases the associated lesions were also considered coincidental findings. In 1954 Thorson et al[14] reported additional cases showing these systemic manifestations and cardiac lesions. They reviewed previous similar cases, and in looking for a common denominator

Colonel Mattingly

Colonel Thomas W. Mattingly, who was selected by the Committee to write the sixth article in this special series, is the same Colonel Mattingly who was called into consultation frequently during President Eisenhower's illness in the fall of 1955.

A native of Marbury, Maryland, Colonel Mattingly graduated in 1930 from Georgetown University School of Medicine. He served as intern and resident at Emergency Hospital and later was a Fellow in Medicine under our own Editor, Dr. Wallace M. Yater, and a Fellow in Pathology at the Georgetown Hospital and Medical School. He is presently Clinical Assistant Professor of Medicine at Georgetown University.

Since entering on active military duty in 1934, Colonel Mattingly has served with distinction at many stateside Army hospitals. During World War II, he was Base Surgeon at Hollandia, New Guinea, where he had a maximum of 10,000 hospital beds under his jurisdiction.

During his present assignment at Walter Reed as Chief of the Cardiology Service (since 1951), Colonel Mattingly has developed one of the outstanding cardiology units in the military services and in the United States, and has trained a number of residents in cardiology and internal medicine. He has pioneered in the use of teaching aids for group instruction in cardiology. The present clinic at Walter Reed has been used as a model by many institutions throughout the country. It services military personnel in the eastern half of the United States as well as in the European theater.

Colonel Mattingly represents the Assistant Secretary of Defense (Health and Medicine) on the National Advisory Heart Council of the National Institutes of Health. He has served as Consultant in Cardiology to the Surgeon General of the Army since 1951.

Colonel Mattingly resides with his wife and children in Officers Quarters at Walter Reed. The Mattinglys have four sons and a daughter. Thomas W., Jr., is a freshman at Georgetown University, and Marie, a junior at the University of Maryland. The three young sons are named Michael, Patrick and Francis.

Colonel Mattingly plays golf, although infrequently, and likes to fish. However, he qualifies his enthusiasm for the latter activity by stating that he enjoys fishing only when the fish bite—"I don't believe in sitting around waiting for them."

they considered the observations of Erspamer[6] and Lembeck[5] to be pertinent and suggested that under certain conditions these tumors were capable of producing serotonin in sufficient amounts to produce widespread systemic symptoms and lesions of the valves of the heart. This was followed shortly by the recognition of other living patients having carcinoid tumors with systemic manifestations. These patients were found to have abnormal amounts of serotonin in their blood, to excrete abnormal amounts of 5-hydroxyindoleacetic acid in their urine, which is a recognized breakdown product of 5-hydroxytryptamine in the body, and demonstrate abnormalities of tryptophan metabolism.[15]

Thus, in a few years a new concept evolved in which certain carcinoid tumors were considered "truly functioning tumors" with secretory cells similar to the pheochromocytomas of the adrenal gland and the islet cell tumors of the pancreas. Such functioning carcinoids were capable of producing clinical features and biochemical abnormalities which permitted a clinical recognition and laboratory diagnosis.

With the widespread publication of this feature of the carcinoid tumor, it is no longer just a "romantic tumor" to the pathologist but is now a clinical entity of interest to clinicians in many fields, including dermatology, allergy, cardiology, gastroenterology, endocrinology, and psychiatry. To me it opened new concepts in the etiology and mechanisms in the production of acquired valvular and endocardial lesions of the heart and has added another cause to the growing list of unusual causes of heart disease. Unfortunately, however, many teachers and clinicians have already labeled the clinical features of this functioning tumor as the "Thorson-Biörck syndrome," the "syndrome of malignant carcinoid," or the "carcinoid flushing syndrome." Such an approach only serves to plague the student of medicine with another syndrome to memorize rather than to understand and recognize a primary disease.

In preparing this progress article on this interesting and new clinical entity it was necessary to review again the clinical knowledge accumulated over the years as it relates to the apparently benign nonfunctioning carcinoid as well as the detail features of this newly recognized functioning tumor, since the symptomatology of the one gradually passes into the other. There is definite evidence that functioning tumors present a variety of clinical features and that many will be missed if only the complete picture of the so-called "syndrome of malignant carcinoid" is considered.

Incidence of Carcinoid Tumors

Carcinoid tumors have been found in the gastrointestinal tract from the cardia of the stomach to and including the rectum. Rare locations have been reported in the gallbladder and in the gastrointestinal elements of teratomas located primarily in the ovary, testes, and retroperitoneal regions. They have also been found in Meckel's diverticulum of the ileum and in diverticula in other regions of the small intestine. The highest incidence occurs in the vermiform appendix. Surveys from large hospitals and clinics show about 1 carcinoid in every 200 to 500 appendices removed surgically (0.2 per cent to 0.5 per cent). The number found in the appendix far exceeds the total incidence elsewhere in the intestinal tract and constitutes 80 to 90 per cent of all carcinoids reported. The second highest incidence occurs in the small intestine, with the greatest number being found in the lower ileum. The next highest is in the jejunum, and the lowest incidence occurs in the duodenum. The rectum is the second highest of the extra-appendiceal locations. The cecum and the colon are third, and the stomach has the lowest incidence.

In a recent editorial Dockerty[16] gave the following analysis of 565 extra-appendiceal lesions gleaned from the literature: 396 ileal, 69 rectal, 25 colonic, 15 gastric, 17 cecal, 13 jejunal, and 10 duodenal, with 6 arising from gastrointestinal components of a teratoma and 4 from the gallbladder. This analysis did not include material from The Armed Forces Institute of Pathology,[17] in which a total of 243 cases of carcinoids of the small intestine were reviewed. In this latter series 172 occurred in the ileum, with 9 in Meckel's diverticulum, 36 in the jejunum, 15 in the duodenum, and 20 in an unspecified portion of the small intestine.

Characteristics of Primary and Metastatic Lesions

The primary carcinoid tumor is a small tumor, and the growths are multiple in 25 to 28 per cent of cases in large series.[16, 17] As many as 100 separate lesions have been found scattered over a large area of the intestine. They are submucosal and small, rarely exceeding 1 to 2 cm. in diameter. At times they may be multicentric in the bowel. Except in secondary complications, such as intestinal obstruction, gangrene, infection, etc., the mucosa over the nodule remains intact, and ulceration or necrosis ordinarily is not seen. They project as small raised nodules in the lumen of the bowel and are hard when palpated. The external appearance of the organ will depend upon whether there has been invasion of all or part of the wall, or invasion or gross involvement of the bowel mesentery. In the benign localized lesion there is, at most, a slight puckering of the bowel overlying the tumor. Upon section the nodule is yellow and firm.

Carcinoid tumors vary greatly as to the frequency with which they invade the intestinal wall, spread to other regions of the abdominal and pelvic cavities, or metastasize to distant parts of the body. In general, the lowest incidence of invasiveness occurs in the appendix, rectum and stomach, with the highest incidence in the small intestine and the next highest in the cecum and colon. In the small intestine the highest incidence of invasiveness is in the ileum.

In surgical specimens resected from the ileum, metastasis was reported in 75 per cent or more.[16, 17] In a total of 226 cases of carcinoid of the small intestine reported in the large series and reviews of Cooke,[18] Ariel,[19] and Pearson and Fitzgerald,[20] as summarized by Lauzé,[21] 32 per cent were considered malignant and 68 per cent benign. In The Armed Forces Institute of Pathology series[17] of 243 cases, consisting of 30 surgical and 213 autopsy cases, 43 per cent were considered malignant and 57 per cent benign.

In the great majority of those tumors classified as malignant, the malignant feature consisted of extension through the intestinal wall and spread into the regional lymph nodes and mesentery with only about one-third, or 10 to 15 per cent, showing metastases to the hepatic, pancreatic, ovarian, pelvic, and retroperitoneal areas, and only occasionally to more distant areas. When metastasis does spread to the liver and other organs, the volume of tumor tissue in the liver or other areas may reach several thousand grams and may result in an easily recognizable hepatomegaly or in palpable abdominal masses. Occasionally some of the larger metastatic lesions may undergo cystic degeneration.[22, 23] There has been 1 reported instance in which this has resulted in complications requiring drainage.[22] Ordinarily patients tolerate these metastatic lesions well and live for years with a recognized lesion in the liver, ovary, or elsewhere.[24, 25] This feature tends to clinically differentiate malignant carcinoids from other malignant tumors of the intestinal tract. There are certain pathologic changes which occur in the small intestine as the tumors invade the intestinal wall and are important, since they are responsible for the few symptoms that develop in the nonfunctioning tumors and provide the basis for the abnormalities that are occasionally recognized in X-ray examinations of the intestinal tract.

In the benign state these tumors are small and submucosal. They do not produce obstructive symptoms or other symptoms of intestinal dysfunction. However, as extension progresses into the muscularis and serosa and infiltrates the mesentery, a growth of supportive fibrous tissue with a contracture of the intestine at the site of mesenteric attachment often occurs. This may cause angulation of the bowel and adhesions of serosal surfaces and result in partial or complete, acute or chronic intestinal obstruction. As a consequence there is dilatation of the bowel above the lesion and contraction below. Intussusception occurs in otherwise healthy persons, and gangrene and perforation result if the condition is not recognized and properly treated. This is an important surgical aspect of these tumors. As the tumor infiltrates and extends into regional lymph nodes, there are increasing opportunities to produce obstructive symptoms.

SYMPTOMS OF THE NONFUNCTIONING CARCINOID

The symptoms of the nonfunctioning carcinoid depend upon the site of the primary lesion, whether it has remained benign and localized to the submucosal region or whether it is locally invasive, or has widespread abdominal metastasis. The size of the primary tumor itself is rarely a factor except in the appendix, where the lumen of the appendix is small and is easily obstructed by a small tumor. The majority of carcinoids in surgically removed appendices have been found in patients who were 30 years of age or under at the time of surgery. This suggests that obstructive features occur early and probably play some part in the symptoms of appendicitis, but no clinical difference has been noted in those cases associated with carcinoids from those without carcinoids. It is also interesting that carcinoids of the appendix have been more frequent in females, whereas similar lesions in the small bowel are more common in males and tend to occur more frequently after the age of 50. Only about 1 per cent of appendiceal carcinoids show metastasis, and in those reported in the literature no distinctive symptoms occur.

EXTRA-APPENDICEAL CARCINOIDS

Stomach. Carcinoids of the stomach are extremely rare and produce no distinctive symptoms. In a review of 18 cases in the literature as of 1952,[26] 10 were considered as incidental findings at autopsy or with no known symptoms, 1 had extensive metastasis with symptoms of indigestion and weight loss, and others had symptoms of ulcer, and the carcinoids were found at the time of surgery for the ulcer and probably were not directly responsible for the symptoms.

Rectum. Carcinoids of the rectum cause no distinctive symptoms. The majority are found at the time of rectal or proctoscopic examination or during routine examinations. About 10 per cent of those reported have shown metastasis, and the symptoms in these were similar to those in other malignant tumors.

Cecum and Colon. Carcinoids in the cecum and colon are asymptomatic until they extend through the bowel and to the mesentery and regional nodes. In these cases the symptomatology mimics that of carcinoma except that there is generally no anemia or melena. The symptoms most frequently encountered are intermittent lower bowel obstruction, diarrhea, and weight loss. Where node or mesentery metastasis is marked, tumor masses may be palpable.

Duodenum. Although carcinoids of the duodenum are rare, a high percentage of those reported have symptoms, but they are not distinctive. They have been found with recurring peptic ulcers. Several have produced high intestinal obstruction, and there was 1 instance of chronic duodenal obstruction reported as a result of edema or prolapse of the tumor through the pyloric ring.[27] Others in the pre-ampullary region have caused obstruction to the ampulla with the development of jaundice. Mrazek et al[28] described the occurrence of high, partial small bowel obstruction and filling defect in the first portion of the duodenum. These were seen in X-ray examinations and they considered such manifestations as being highly indicative of this lesion. Metastasis, or spread beyond the intestinal wall, as reported in the literature, is rare in this lesion, but there is confusion in the differential clinical and pathologic diagnosis of carcinoids of the duodenum and pancreatic adenomas at the present time.

Jejunum. Carcinoids of the jejunum are rarely symptomatic, and the majority reported in the literature have been incidental findings at autopsy. A few patients, however, have come to surgery with a clinical picture of acute or chronic obstructive symptoms requiring exploratory laparotomy and intestinal resection. Angulation and acute obstruction of the intestine may occur with intussusception, gangrene and perforation. Widespread metastasis as reported is rare.

Ileum. The highest incidence of spread and metastasis occurs from carcinoids in the ileum and, as would be expected, active symptoms are more frequent. When the tumor remains localized in the submucosa as a benign tumor it rarely produces recognizable symptoms. There have been occasional reports in the literature of cases in which symptoms occurred as a result of bowel obstruction from the mechanical effects of an unusually large benign submucosal ileal carcinoid. In such cases the symptoms were similar to those occurring with acute or intermittent intestinal obstruction from intraluminal obstruction from other causes. When malignant changes occur, as evidenced by extension of the tumor through the intestinal wall to the mesentery and regional nodes, as occur in 30 to 40 per cent of ileal carcinoids, chronic intestinal symptoms develop. These symptoms consist chiefly of intermittent abdominal pain, distress, bloating, and distention, recognizable bouts of intermittent small bowel obstruction, intermittent diarrhea, and weight loss. Progressive weight loss was stressed by Grimes and Bell,[29] yet patients with carcinoid tumors do not have a progressive downhill course as do other patients with small or large bowel malignant lesions. Anemia is not common, and melena or acute bowel hemorrhage does not occur except when there is acute obstruction with bowel intussusception and gangrene. Intestinal bleeding has been seen in patients who have coincidental bleeding peptic ulcers and intestinal carcinoids or carcinoids and ulcerative adenocarcinoma of the bowel occurring simultaneously. The simultaneous occurrence of peptic ulcers and carcinoids elsewhere in the intestinal tract is frequent and may be more than just coincidental. Roentgenographic examinations of the small intestine with a barium meal have been made in many of the patients reported in the literature, but, other than establishing the site of obstruction in some patients, such has added little to the diagnosis of the specific tumor involved. Miller and Herrmann[30] have suggested that acute knuckling and kinking of the small bowel with a filling defect at the site of obstruction indicates ileal carcinoids.

The majority of ileal carcinoids which have been found at the time of surgery were discovered during emergency surgical procedures which were being performed for acute intestinal obstruction, intussusception, or complications of obstruction or during exploratory laparotomies for chronic intermittent obstructive symptoms suggesting benign or malignant lesions in the bowel.

When extension and metastasis spread to other organs or regions of the abdominal and pelvic cavities, tumor masses may become palpable or ascites may develop. In general, however, there is nothing distinctive in the abdominal examination, other than findings at the time of surgical exploration or biopsy, which would tend to distinguish such metastasis from that of other tumors except for the absence of symptoms indicating rapid growth, necrosis, and anemia as is often seen in highly malignant lesions of the intestinal tract. The appearance of well-being associated with a recognized, slowly growing metastatic lesion in the liver or right lower quadrant might cause one to be suspicious of the presence of a metastatic malignant carcinoid.

From a review of the literature it is obvious that the clinical diagnosis of malignant carcinoids occurring at their most frequent site in the lower ileum has been poor and only slightly better than elsewhere in the gastrointestinal tract. The recent observation that some of these tumors become "functioning tumors" and are associated with recognizable clinical features related to other systems provides a greater opportunity for clinical diagnosis. Furthermore, the extension of laboratory examinations such as urine screening tests for abnormal serotonin metabolites[31] to patients with suspicious intestinal symptoms might aid in the diagnosis of intestinal carcinoids in patients who do not present the other recognizable clinical manifestations of "functioning carcinoids."

FUNCTIONING CARCINOIDS

Pathophysiologic Basis for the Concept of Functioning Carcinoid Tumors. The present concept of a functioning carcinoid tumor is based on the assumption that the normal enterochromaffin cells of the gastrointestinal tract constitute en masse a secretory endocrine gland which produces serotonin from tryptophan, an amino acid, and releases this substance into the blood or lymph flowing from the intestinal tract or may act directly on nerve plexuses of the intestinal tract.

If a tumor arising from these cells of the intestinal tract has the ability to manufacture serotonin, it is theoretically possible that with sufficient increase in the number of cells with this function an excess of this normal secretory substance would result which could be capable of eliciting exaggerated physiologic activity. It could even produce pathologic changes if not properly and promptly metabolized.

Small amounts of circulating serotonin (0.1 to 0.3 microgram per c.c.) are found in the blood of the normal human being, and small quantities of 5-hydroxyindoleacetic acid (2 to 9 mg. in 24 hours), a metabolite of serotonin, is found in the normal urine.[15] At present we do not know if there are physiologic states which might result in marked variations of these normal values. Normal reservoirs of serotonin exist in the body, especially in the circulating blood platelets.[32] The known as well as the hypothetical physiologic role of serotonin has been widely discussed and was recently summarized.[15, 33] The pharmacodynamic action and results of serotonin on body tissues have long been a subject of extensive investigation. This is especially true regarding its effect on blood vessels, blood pressure, smooth muscle of the intestine and bronchi,[8, 15, 34–38] and its possible role in pathologic states of thrombosis,[39, 40, 41] brain disease,[42] and more recently on sclerosis of endothelial and endocardial tissues. The origin and metabolism of serotonin in the human body have been studied by Sjoerdsma and associates.[15, 43] The results of their studies indicate that serotonin-producing tumors can cause utilization of large quantities of tryptophan, an essential amino acid, and can therefore result in a chronic deficiency state. This provides an explanation for the muscle wasting and part of the weight loss which accompany these tumors and for the existence of a metabolic defect in patients who have a functioning tumor.

CLINICAL EVIDENCE OF FUNCTIONING CARCINOIDS

Systemic symptoms which occur with a malignant carcinoid have been reported since Ransom's first description of a metastatic carcinoid in 1890,[44] but such symptoms were similar to those of other malignant tumors of the intestinal tract. The first well-documented clinical and pathologic description of unusual systemic symptoms and remote pathologic findings in a carcinoid, which we now recognize as definite evidence of a clinically functioning carcinoid, is believed to be that observed by Scholte in 1929 and published in 1931 as "A Case of Angioma Telangiectaticum Cutis with Chronic Endocarditis and Malignant Carcinoid of the Small Intestine."[13] Although Scholte considered the possibilities of a common denominator in the production of the multiplicity of lesions found, he was unable to arrive at a suitable explanation for their relationship and finally decided that he was dealing with 3 separate diseases. Otherwise, there is nothing new to add to the clinical and pathologic descriptions of a functioning carcinoid or of the "syndrome of malignant carcinoid" or "Thorson-Biörck syndrome" as we understand it today.

Dr. A. J. Scholte of the Pathologic Anatomical Laboratory of Wilhelmina Hospital, Amsterdam, presented this paper for publication in 1930 with an opening statement, "In the following we make a report concerning a case which is remarkable on account of several simultaneous diseases." The following lengthy abstract and quotations of a free translation of this report of Scholte's are given because of their excellent description and discussion.

This case report concerned a 47-year-old man who was autopsied in 1929. The patient was initially studied 2 years before death in the Dermatology Section of the State University Clinic. A diagnosis of hemangioma planum was made. His features had been red from youth. During the last 3 years they had become darker (duskier), and his arms and body gradually had become red. There were no itching, no pains, no hemorrhages into the skin, and no nose bleeds. The patient otherwise was never sick. His relatives had no diseases of the skin. During his investigation the physician (Dr. C. Postma) found that the skin of the face, neck, chest, upper arm were strongly (colored) while the lower arm, legs, back and abdomen were weakly colored. The skin was light bluish-red to dark violet red due to the presence of a large number of vessels. With pressure the color became lighter, but one could not obtain full or perfect bloodlessness.

The examination at that time showed an enlarged heart and a systolic murmur at the apex and over the pulmonary valve.

He returned again in 1928 because of his heart. He had dyspnea and cyanosis, and the heart enlargement and murmur were again noted. The liver was enlarged. The stools were diarrheal. He improved and was discharged, but he was readmitted to the Psychiatric Clinic of Wilhelmina Hospital in 1929 with a perplexing heart disease. At this time, the skin of the face, breast, back and extremities was strongly cyanotic. There was edema of the legs, hands, and abdominal wall. The clinical course was downhill, with diarrhea and congestive failure. Clinical diagnosis: decompensation of the heart and generalized telangiectasia.

Portions of the autopsy findings are quoted for detail information:

"The heart is large, dilated, hypertrophied, especially the right ventricle. The pericardium is diffusely thickened. The endocardium of the right atrium shows irregular thickening, with sharply limited greyish-white areas, some elevated, and measuring up to 2 to 4 cm. in size. Similar thickened areas are found in both ventricles, the right more than the left, and involve the anterior leaflet of the mitral valve. The intima of the superior vena cava at the entrance into the right atrium is also irregularly thickened. The chordae tendineae are thickened and measure up to 4 mm. in thickness in the region of the mitral insertion.

"The valves of the right heart are considerably altered, the pulmonary ostium is stenosed, and the pulmonary valve leaflets are very much shortened and thickened.

"The tricuspid valve leaflets are thickened to the consistency of cartilage, and all the chordae are thickened similar to that seen in the left ventricle. The heart weighed 450 Gm.

"The right lower lobe of the lung shows a lobular bronchopneumonia and an infarction-like area with pleuritis. There is congestion of the spleen, liver, and kidneys. The liver is greatly enlarged (weight 2,370 Gm.), and on the upper surface there are many large (0.3 to 3 cm.), round, elevated, sometimes confluent, greyish-white tumors. On cut surface the color of the tumor is multicolored, from greyish-white to a reddish violet. They are sharply demarcated from the liver parenchyma. The gallbladder contains a large number of gallstones.

"There is stenosis of the ileum 50 cm. above the ileocecal valve, and in the submucosa and mucosa lies a greyish-white tumor about 1 cm. in its largest diameter. The adjacent part of the mesentery is infiltrated and there is an enlarged (2 x 4 cm.) lymph gland which is almost entirely replaced by tumor similar to that of the liver tumor. The intestinal wall is involved with this tumor, hence stenosing the lumen.

"The mucosa of the colon is very finely granular; the granules are red, somewhat coated.

"The pathological and anatomical diagnoses are: (1) telangiectasia of the skin, (2) cardiac hypertrophy, (3) chronic endocarditis of the tricuspid and pulmonary valve, (4) endocardial thickening, especially of the right atrium, (5) bronchopneumonia and infarcts of the lower lobes, right lung, with pleuritis, (6) congestion of the viscera, (7) gallstones, (8) colitis, (9) a tumor in the ileum, tumor in the liver."

Microscopic examination:

"In the skin of the breast in the upper layer of the corium all the capillaries are considerably widened and congested, the walls show hyaline degeneration, and scattered perivascular small cell infiltration.

"In the deeper layers of the corium the vessels are more or less widened and in the adipose tissue of the skin on the other hand there are many widened vessels. The small veins and arteries take part in the widening. In the skin of the upper thigh there is less dilatation and congestion and the vessel walls here also are somewhat degenerated.

"The epicardium is irregularly thickened and shows small collections of lymphocytes which are found also in the muscle layer. The endocardium in some areas is normal and thickened in other areas. The transition is gradual. The thickened areas consist of connective tissue with many fibroblasts. The connective tissue bundles tend to run parallel to the upper surface of the endocardium and have many elastic fibers between them which run chiefly in the same direction nevertheless to bind together the obliquely running fibers. The elastic fibers are most numerous in the deeper layers of the endocardium.

"The endocardial thickening in the right atrium and in the superior vena cava shows the same changes, but the lymphocyte infiltrate is present only in the endocardium.

"The pulmonary and tricuspid valves are greatly thickened, the changes consisting of a large increase of connective tissue with infiltration of many lymphocytes with a few other leukocytes. Many vessels are found in the subendothelial thickening of the tricuspid valve.

"The tumor of the ileum, together with the tumor of the mesentery glands, was studied. The tumor, which at the time of the microscopic consideration appeared to lie in the submucosa, grows in some areas in the mucosa and in other areas in the muscularis and serosa, from where it continues out into the mesentery. The tumor consists of some unusually large cells about the size of a liver cell which have a moderately dark-staining nucleus. The color of the nucleus changes, however. Now and then the cell arrangement is like the lumen of a gland. In the wall of the intestine the tumor has only a little stroma. In the mesentery, on the other hand, there is rather marked stroma. The connective tissue shows hyaline degeneration. The tumor cells here are much more cylindrical and radiate about the blood vessels. In some cells, several nuclei occur. Small areas of hemorrhage and necrosis are found in the tumor. The Sudan stain shows a little fat in the cells.

"The tumor of the liver shows approximately the same architecture as the tumors of the ileum. Between the tumor strands lies a little stroma with vessels which often are widely dilated. Numerous large and small hemorrhages are found. Now and then it seems as if the tumor cells are intimately mixed with the blood cells. The tumors are often more or less distinctly surrounded (encapsulated) with liver parenchyma. In many areas the liver shows undoubtedly infiltrative growths.

"The remaining liver parenchyma is congested and has increase of connective tissue in the center as well as in the periphery of the lobule. The tumor of the ileum is thought to be a carcinoid; still the cells here are somewhat larger and more irregular, compared to the accepted tumors. The liver tumor and the tumor of the ileum are very similar."

The following comments and discussion were given by the author at that time.

"Can one bring all these changes together? Is the skin affection related to the heart disease? Are the liver tumor metastases from a carcinoid of the small intestine? Is the endocardial thickening consequent to an inflammation? Are they dependent on a raised pressure in the heart?

"That the skin affection should depend solely on congestion is highly improbable and perplexing, especially since the lower extremity is least affected. . . .

"In our case the tumor of the small bowel had the characteristic structure of a carcinoid, only that the cells are larger and irregular. Also there was almost complete absence of lipoid in the tumor cells. The character of the cell justifies the findings of malignant carcinoid. The tumor has extended into the mesentery. The liver tumors have about the same structure; they are very hyperemic and show hemorrhages. We consider the intestine, mesentery, and liver tumor as primary in the small intestine with metastasis.

"We come finally to the marked endocardial thickening which we have described in our case. The endocardium is not thickened, however, in any of the heart cavities in its entire expanse. If the described endocardial thickening depends on an inflammation, it should produce a diffuse thickening, along with generalized high blood pressure and with damage to the heart musculature. In the latter case one finds in the endocardium an increase of connective tissue and elastic tissue which is chiefly arranged in parallel layers (functional elastic endocardial fibrosis of the wall).

"The etiology of the process of endocardial thickening is mostly an inflammation or an endocarditis parietalis, either independently or originating as an extension of the endocarditis of the valves and chordae tendineae. In those instances in which the endocardial thickening depends on inflammation, one finds all layers of the endocardium affected. In those instances depending on a process of primary sclerosis, the sclerosis is chiefly localized in the subendothelial layers. When one has considered all the causes, the diagnosis of the etiology is very hard or even impossible.

"In our case, where the endocardial thickening lies chiefly in the right ventricle, and where the different endocardial layers are not easily distinguishable, it is difficult to say whether we have a primary sclerosis or sclerosis on the basis of an infection. Since we also have found in many microscopic preparations an increase of connective tissue and elastic fibers with lymphocyte infiltration in the endocardium and myocardium, we believe rather that the endocardial thickening is the result of an inflammatory process. With the absence of the elevated blood pressure, the endocardial thickening should be more diffuse.

"We accept in this case three different processes: (1) chronic endocarditis (valvular and parietal); (2) angioma telangiectaticum cutis; (3) malignant carcinoid of the small intestine with extension into the mesentery and metastases in the liver."

Subsequent publications[9, 14, 22, 33, 45] overlooked the details of Scholte's original report or stressed the observations of Sir Maurice Cassidy,[46, 47] who one year later (1931) published in the *Proceedings of the Royal Society of Medicine* his observations of a patient who had phenomenal flushes of the face, intermittent atacks of diarrhea and abdominal pain, a heart murmur, a pelvic mass, ascites, and edema, and who died with a terminal picture of heart failure. A well marked stenosis of the pulmonary valve was found at autopsy. No primary tumor was found in the intestine. The liver contained metastatic tumor nodules, and the pelvic organs were embedded in a mass of sclerotic tumor tissue in which a primary source could not be found. Sections from the nodules in the liver showed that these "resembled secondary deposits of columnar carcinoma, dissimilar to secondary deposits arising from a primary carcinoma of the intestine but consistent with a primary carcinoma of the prostate." Although the primary lesion was not found by histologic examination and the metastatic lesion was not identified as a carcinoid, it is probable that it was such and that it was a functioning carcinoid. Fibrous, tissue-sclerosing lesions have been seen in other instances of well reorganized metastatic carcinoids. Cassidy's description of the skin lesions and his published color plates are a real contribution.[48]

Since the original case of Scholte, there have been 20 additional well-documented cases with autopsies showing well identified carcinoid lesions, endocardial lesions of the heart, and with good clinical descriptions of the cutaneous vascular lesions (table 1). There were also symptoms of hyperperistalsis (diarrhea) and metabolic disorders (loss of weight). This table does not include the 2 probable cases as reported by Cassidy,[47, 48] 1 probable early case reported by Arnett and Long,[56] and another probable case reported by Rosenbaum[10] (case 2). These 4 probable cases all presented clinical features and pathologic findings strongly suggestive of a functioning carcinoid, but in each the histologic and pathologic diagnoses of primary and/or metastatic lesions were not originally made as carcinoid but were diagnosed as carcinomas.

There are 8 additional case reports (table 2) in which a diagnosis of a malignant carcinoid was well established by surgery, biopsy, or postmortem examination and which, during life, presented the symptoms of intestinal hyperperistalsis (diarrhea), weight loss, cutaneous flushing, and some cardiac symptoms or abnormal cardiovascular findings. No endocardial lesions were found at autopsy, however, nor was there any definite diagnosis of cardiac lesions made clinically or by autopsy. These, therefore, constitute cases with most of the symptoms and findings of well established functioning carcinoids but do not have the established valvular lesions of the right side of the heart as seen in the other 21 cases in table 1.

There are in addition 9 living patients reported to date in whom diagnoses of malignant carcinoids have been made from surgical biopsies (table 3). These patients have all or part of the clinical features as shown in cases with autopsies in table 1, and many have abnormal chemical tests indicating a functioning tumor.

(To be continued)

BIBLIOGRAPHY*

1. Lubarsch, O.: Ueber den primären Krebs des Ileum, nebst Bemerkungen über das gleichzeitige Vorkommen von Krebs und Tuberculose. Arch. path. Anat., 1888, **111**, 280.
2. Oberndorfer, S.: Karzinoide Tumoren des Dünndarms. Frankfurt. Ztschr. Path., 1907, **1**, 426.
3. Forbus, W. D.: Argentaffine tumors of appendix and small intestine. Bull. Johns Hopkins Hosp., 1925, **37**, 130.
4. Gosset, A., and Masson, P.: Tumeurs endocrines de l'appendice. Presse méd., 1914, **22**, 237.
5. Lembeck, F.: 5-Hydroxytryptamine in carcinoid tumor. Nature, London, 1953, **172**, 910.
6. Erspamer, V., and Asero, B.: Identification of enteramine, specific hormone of enterochromaffin cell system, as 5-hydroxytryptamine. Ibid., 1952, **169**, 800.
7. Rapport, M. M.: Serum vasoconstrictor (serotonin); presence of creatinine in complex. Proposed structure of vasoconstrictor principle. J. Biol. Chem., 1949, **180**, 961.
8. Erspamer, V.: Pharmacology of indolealkylamines. Pharmacol. Rev., 1954, **6**, 425.
9. Biörck, G., Axen, O., and Thorson, A.: Unusual cyanosis in boy with congenital pulmonary stenosis and triscuspid insufficiency. Fatal outcome after angiocardiography. Am. Heart J., 1952, **44**, 143.
10. Rosenbaum, F. F., Santer, D. G., and Claudon, D. B.: Essential telangiectasia, pulmonic and tricuspid stenosis, and neoplastic liver disease. A possible new clinical syndrome. Abstracted, J. Lab. & Clin. Med., 1953, **42**, 1941.
11. Isler, P., and Hedinger, C.: Metastasierendes Dunndarmcarcinoid mit schweren, vorwiegend das rechte Herz betreffenden Klappenfehlern und Pulmonalstenose—ein eigenartiger Symptomenkomplex? Schweiz. med. Wchnschr., 1953, **83**, 4.
12. Waldenstrom, J., and Ljungberg, E.: Carcinoids and vasomotoric symptoms. Svenska läk.-sällsk. forhandl., 1953, **50**, 690.
13. Scholte, A. J.: Ein Fall von Angioma teleangiectaticum cutis mit chronischer Endocarditis und malignem Dünndarmcarcinoid. Beitr. path. Anat., 1931, **86**, 440.
14. Thorson, A., Biörck, G., Bjorkman, G., and Waldenström, J.: Malignant carcinoid of small intestine with metastases to liver, valvular disease of right side of heart (pulmonary stenosis and tricuspid regurgitation without septal defects), peripheral vasomotor symptoms, bronchoconstriction, and unusual type of cyanosis. A clinical and pathologic syndrome. Am. Heart J., 1954, **47**, 795.
15. Sjoerdsma, A., Weissbach, H., and Udenfriend, S.: Clinical, physiologic and biochemical study of patients with malignant carcinoid (argentaffinoma). Am. J. Med., 1956, **20**, 520.
16. Dockerty, M. B.: Carcinoids of the gastrointestinal tract; an editorial. Am. J. Clin. Path., 1955, **25**, 794.
17. Helwig, E. B., and Manion, W. C.: Carcinoid tumors; review of pathology, to be published.
18. Cooke, H. H.: Carcinoid tumors of small intestine. A.M.A. Arch. Surg., 1931, **22**, 568.
19. Ariel, I. M.: Argentaffin (carcinoid) tumors of small intestine; report of 11 cases and review of literature. A.M.A. Arch. Path., 1939, **27**, 25.

---

* Editor's note: In this series the bibliography will be presented more fully than customary so that reference material can be readily identified.

TABLE 1

Metastatic Carcinoids with Clinical Features of Functioning Tumors Including Lesions in Right Heart at Autopsy

Author	Year, Sex, Age	Gastrointestinal	Metabolic	Cutaneous-vascular	Cardiovascular*
Scholte[13]	1931, M, 47	Diarrhea; hepatomegaly	Not mentioned	Red flush from youth; miliary telangiectasia; terminal cyanosis	PV stenosis. TV and MV-thickened RVH; RAD; blood pressure normal; congestive failure
Millman[22]	1943, F, 44	Intermittent abdominal pain 8½ yrs.; hepatomegaly with cystic areas	Weakness; weight loss 25 lbs. in 5 mos.; poor nutrition; total proteins low	Peculiar flush as long as could remember; telangiectasia; terminal ruddy-purple cyanosis	PV and TV stenosis; fibrous endocardium, right atrium; RAD; blood pressure normal; congestive failure
Biörck et al[9]	1952, M, 19	Spasmodic abdominal pain; diarrhea; pulsating liver	Weakness; underdeveloped	Red flush, areas of cyanosis of 8 yrs. duration; asthma; pellagra-like skin lesions	PV stenosis; TV insufficiency RVH; RAD; blood pressure variable; died suddenly following angiocardiography
Isler and Hedinger[11]	1953, F, 56	Abdominal pain; diarrhea of month's duration; hepatomegaly	Marked cachexia	Bluish-red skin (duration?); pruritus; terminal cyanosis	PV stenosis; TV scarred; RVH; blood pressure normal; congestive failure
Isler and Hedinger[11]	1953, F, 64	Diarrhea (duration?); hepatomegaly	Poor nutritional state	Reddened skin; marked cyanosis (duration?); terminal	PV stenosis; TV thickened and fused; RVH; RAD; blood pressure?; congestive failure
Isler and Hedinger[11]	1953, M, 33	Progressive liver enlargement	Not mentioned	Intermittent cyanosis 14 years	PV stenosis; TV sclerosed; endocardium thickened, right atrium; blood pressure?; congestive failure
Rosenbaum et al[10] (Case no. 1)	1953, ?	Hepatomegaly 10 yrs.	Not stated in brief abstract	Extensive telangiectasia 20 years; purple-greyish face	PV and TV stenosis; MV minor changes; blood pressure?; congestive failure
Thorson et al[14] (Case no. 2)	1954, M, 63	Recurrent abdominal pain and intestinal obstruction; diarrhea; hepatomegaly	Rapid weight loss last year	Heat waves 9 years; reddening of the sclera	PV stenosis; TV normal; RVH; RAD; LVH; blood pressure fluctuated high to low; congestive failure
Hedinger and Gloor[49]	1954, M, 76	Intermittent abdominal pain and diarrhea 2 yrs.; hepatomegaly	Marked cachexia; hypoproteinemia	Recurrent violaceous and red flushes; terminal cyanosis	PV stenosis; TV sclerosis; RVH; endocardial scars of right atrium; blood pressure elevated; congestive failure
Branwood and Bain[50]	1954, M, 40	Diarrhea 18 mos.; hepatomegaly	Not mentioned	Periodic purplish-red flushing; peculiar cyanosis; telangiectasia	PV stenosis; TV thickened; RVH; RAD; blood pressure normal; congestive failure
Bean et al[45]	1955, F, 42	Diarrhea 18 mos.; crampy abdominal pain; hepatomegaly	Weakness; weight loss 40 lbs.	Bizarre periodic flushing 1 yr.	PV and AV thickened and contracted; TV and AV and cords thickened; RVH; blood pressure normal

Bean et al[45]	1955, M, 43	Appendectomy 2 yrs. prior to death; hepatomegaly	Weight loss 18 lbs.	Flushing episodes 2 yrs.	Valvulitis of all valves; PV and AV marked; blood pressure normal; incomplete RBBB; congestive failure
Jenkins and Butcher[51] (Case no. 2)	1955, F, 59	Intermittent diarrhea 2 yrs.; ascites; hepatomegaly	Cachexia	Malar flush	PV stenosis; TV thickened; dilated AV; MV thickened; RVH; blood pressure low; congestive failure
Ratzenhofer and Lembeck[52]	1954, F, 68	Not described (autopsy showed carcinoid of ileum and liver metastasis)	Not mentioned	Not mentioned	TV and MV endocarditis; cardiac hypertrophy; congestive failure
Ratzenhofer and Lembeck[52]	1954, F, 65	Symptoms of peritoneal irritation; liver metastasis	Not mentioned	Cyanosis	TV and MV endocarditis; TV insufficiency; congestive failure
Carlsen and Sondergaard[53]	1955, M, 65	Colicky abdominal pain and diarrhea 7 mos.; hepatomegaly	Not mentioned	Red face with cyanosis; telangiectasia	PV stenosis; RVH; RAD; blood pressure normal; open foramen ovale; congestive failure
Olesen[54]	1955, F, 36	Abdominal pain; ascites; no diarrhea; ileus; hepatomegaly	Not mentioned	Reddish flush of face; cyanosis of hands and feet; telangiectasia	PV and TV stenosis; AV and MV normal; endocardium thickened of RA and RV; blood pressure normal; died of ileus
Olesen[54]	1955, M, 52	Periodic abdominal pain; watery diarrhea 2 yrs.; intestinal perforation; peritonitis	Not mentioned	Cyanosis uncertain	TV thickened; tendinous cords thickened; TV insufficiency; RA dilated; PV normal; died of peritonitis
Hanson and Serin[55] (Case no. 1)	1955, M, 57	Recurrent epigastric pain and diarrhea; 2 episodes of intestinal perforation; hepatomegaly	Abnormal blood serotonin value and serotonin metabolites in urine	Patchy flush	PV stenosis; other details not given
McKusick[33] (Case no. 2)	1956, F, 68	Diarrhea 2 mos.; hepatomegaly; pelvic mass	Weight loss 40 lbs.; muscle wasting; weakness	Flushing attacks; terminal cyanosis; telangiectatic areas of face	PV stenosis; valvulitis, TV, MV and AV; patent foramen ovale; blood pressure elevated; focal endocardial fibrosis; congestive failure
Sjoerdsma[15] (Case no. 5)	1956, M, ?	Diarrhea 2½ yrs.; abdominal pain	Not mentioned	Red-bluish discoloration of face	PV stenosis; RVH; blood pressure normal; congestive failure

* Abbreviations: PV—pulmonic valve; TV—tricuspid valve; MV—mitral valve; AV—aortic valve; RVH—right ventricular hypertrophy; LVH—left ventricular hypertrophy; RAD—right atrial dilatation; RBBB—right bundle branch block

TABLE 2

Malignant Carcinoids with Clinical Features Indicating Functioning Tumor but without Autopsy Evidence of Cardiac Lesions

Author	Year, Sex, Age	Gastrointestinal	Metabolic	Cutaneous	Cardiovascular
Ljung[23]	1953, M, 43	Appendectomy; recurrent abdominal pain; bulging epigastric tumor	Not mentioned	High color for years; persistent red flush 1 year	Cardiac enlargement; slight systolic murmur; blood pressure elevated; inadequate autopsy
Thorson et al[14] (Case no. 6)	1954, F, 59	Diarrhea; intermittent abdominal pain; ascites	Marked weight loss; cachexia; weakness	"Periodic red flushes"; "butterfly cyanosis of face"	Systolic murmur pulmonic; blood pressure elevated; ECG suggested pulmonary hypertension; normal at autopsy
Jenkins and Butcher[51] (Case no. 1)	1955, F, 63	Intermittent abdominal pain; diarrhea 18 mos.	Not mentioned	Brick-red color of skin	Systolic murmur; heart normal at autopsy
Fraser[57]	1955, M, 61	Intermittent abdominal pain and diarrhea of long duration	Weight loss	Bright red skin, purplish at times	No clinical symptoms; no autopsy obtained
Dockerty and Scheifley[58]	1955, M, 47	Abdominal pain and ascites 1 yr.; metastatic carcinoid testes removed 12 yrs. prior to death	Not described	Periodic flushing 15 years	Terminal congestive failure; no endocardial or valvular lesion at autopsy; marked constrictive pericarditis
McKusick[33]	1956, M, 53	Diarrhea 22 mos.	Weight loss 30 lbs. in 8 mos.	Flushing face and neck 2 years	No clinical findings of valvular disease; congestive failure; no autopsy
Helwig and Manion[17]	1956, M, 56	Diarrhea and crampy abdominal pain 18 mos.; carcinoid resected from ileum	Weight loss	Deep red blush of skin postoperatively; recurrent thereafter with diffuse cyanotic flush terminally	Systolic murmur precordial; blood pressure fluctuant; slight fibrosis of left ventricle; marked terminal peripheral edema; no right-sided heart lesions at autopsy
Helwig and Manion[17]	1956, M, 78	Abdominal pain; laparotomy; carcinoid resected from ileum; liver metastasis	Weakness; high content of 5 HIAA in urine postoperatively; high content serotonin in metastatic tumor	Red flush of skin with postoperative cyanosis	Dyspnea associated with emphysema; clinical and autopsy finding of arteriosclerotic heart disease; no right-sided lesions

TABLE 3

Clinical and Chemical Diagnoses of Functioning Carcinoids, Living Patients

Author	Year, Sex, Age	Gastrointestinal	Metabolic	Cutaneous	Cardiovascular	Chemical Findings*
Waldenstrom and Ljungberg[12]	1953, F, 43	Recurrent diarrhea; abdominal pain; carcinoid removed, small intestine; liver and ovarian metastases	Weight loss; weakness; prostration	Paroxysmal flushes 3 yrs.; associated dizziness	Murmur and tachycardia during flushes; wheezing and stridor; normal otherwise	Diagnosis by surgical biopsy; clinically functioning tumor; no chemical studies made

Thorson et al[14] (Case no. 4)	1954, F, 48	Abdominal pain; diarrhea; carcinoid removed. small intestine; liver and ovarian metastasis at surgery	Weight loss; weight improved after surgery	Periodic flushes over entire body; cyanosis of cheeks	Systolic murmur; ankle edema	Clinical diagnosis made by characteristic flush; confirmed by surgical biopsy; no chemical studies reported
Daugherty et al[59] (Sjoerdsma[15] Case no. 6)	1955, F, 52	Diarrhea after ileal carcinoid resected; metastatic pelvic mass; no liver metastasis	Weight loss	Periodic flushing precipitated by palpation of pelvic mass, proctoscopic examination and by injection of histamine	None; blood pressure changes with flushing	† Blood 5 HT 1.67 μg./ml. ‡ Urine 5 HIAA 76 mg. 24 hrs.
§ Sjoerdsma[15] (Case no. 1)	1956, F, 38	Recurring abdominal pain; episode of intestinal obstruction; ascites; mass in liver; no surgery	Weight loss; muscle wasting; weakness	Flushing since childhood; patchy cyanotic cheeks	Clinical and catheterization findings of PV stenosis and MV insufficiency RVH; congestive failure 8 years	Blood 5 HT 2.5 μg./ml.; urine 5 HIAA 320 to 392 mg. 24 hrs.
Sjoerdsma[15] (Case no. 2)	1956, F, 50	Diarrhea 3 yrs.; large, nodular liver; biopsy—carcinoid	Weight loss 25 lbs.	Hot flushes since 1946	None	Blood 5 HT 0.5 to 1.5 μg./ml.; urine 5 HIAA 240 to 280 mg. 24 hrs.
Sjoerdsma[15] (Case no. 3)	1956, M, 55	Diarrhea 2 yrs.; surgical removal of ileal carcinoid; metastasis to liver	Weight loss 10 lbs.	Flushing of face and neck precipitated by abdominal examination	Clinical enlargement, right heart; catheterization finding of TV insufficiency; asthma?	Blood 5 HT 1.7 to 2.7 μg./ml.; urine 5 HIAA 214 to 572 mg. 24 hrs.
Sjoerdsma[15] (Case no. 4)	1956, M, 41	Diarrhea; liver biopsy: carcinoid	Weight loss 30 lbs.	Episode of fiery erythema of face and neck; facial edema	None; blood pressure normal	Blood 5 HT 1.7 to 2.7 μg./ml.; urine 5 HIAA 214 to 572 mg. 24 hrs.
Hanson and Serin[55] (Case no. 2)	1955, F, 57	Abdominal pain and attacks of ileus; diarrhea after removal of carcinoid; developed hepatomegaly	Not mentioned	Flushes after drinking alcohol	Systolic heart murmur	Urine 5 HIAA; abnormal before and after surgery; maximum 240 mg./1,000 c.c.
Blechen[60]	1955, F, 64	Diarrhea 6 mos.; hepatomegaly; subcutaneous nodule biopsy showed carcinoid	Not mentioned	Attacks of bright pink flush of face, hands, feet induced by fatty meal; purple telangiectasia; cyanosis of lips; skin nodules	No evidence of valvular heart disease; palpitation and breathlessness with attacks	Urine 5 HIAA 80 to 200 mg. per day; highest when on high fat meals

* Abbreviations: 5 HT—5 hydroxytryptamine (serotonin); 5 HIAA—hydroxyindoleacetic acid.

† Normal: 0.1 to 0.3 μg. per ml.

‡ Normal 24-hour urine, 2 to 9 mg. (from Sjoerdsma et al[15]).

§ Sjoerdsma (personal communication) performed laboratory studies on 6 additional patients with abnormal 5 HIAA values in urine and who had clinical features of a functioning tumor; not included in above publications; 3 with clinical evidence of heart disease.

20. Pearson, C. M., and Fitzgerald, P. J.: Carcinoid tumors—reëmphasis of their malignant nature; review of 140 cases. Cancer, 1949, **2**, 1005.
21. Lauzé, S.: Le carcinoïde du tube digestif. Union méd. Canada, 1951, **80**, 1282.
22. Millman, S.: Tricuspid stenosis and pulmonary stenosis complicating carcinoid of intestine with metastasis to liver. Am. Heart J., 1943, **25**, 391.
23. Ljung, O.: Intensive facial hyperemia in patient with metastatic carcinoid of liver. Nord. med., 1953, **50**, 1143.
24. Wangensteen, O. H.: Personal communication.
25. Case Records of Massachusetts General Hospital: Case 26162: Presentation of Case. New England J. Med., 1940, **222**, 684.
26. Martin, J. D., Jr., and Atkins, E. C., Jr.: Carcinoid of stomach; review of reported cases. Surgery, 1952, **31**, 698.
27. Brackin, R. E.: Carcinoid tumor of duodenum complicated by cyclic vomiting. A.M.A. Arch. Surg., 1954, **69**, 684.
28. Mrazek, R. G., Godwin, M. C., and Mohardt, J.: Carcinoid tumors: clinical and pathological study of 27 cases. Surg., Gynec. & Obst., 1953, **96**, 661.
29. Grimes, O. F., and Bell, H. G.: Carcinoid tumors of intestine. Ibid., 1949, **88**, 317.
30. Miller, E. R., and Herrmann, W. W.: Argentaffin tumors of small bowel: roentgen sign of malignant change. Radiology, 1942, **39**, 214.
31. Sjoerdsma, A., Weissbach, H., and Udenfriend, S.: Simple test for diagnosis of metastatic carcinoid (argentaffinoma). J.A.M.A., 1955, **159**, 397.
32. Udenfriend, S., and Weissbach, H.: Studies on serotonin (5-hydroxytryptamine) in platelets. Fed. Proc., 1954, **13**, 412.
33. McKusick, V. A.: Carcinoid cardiovascular disease. Bull. Johns Hopkins Hosp., 1956, **98**, 13.
34. Page, I. H.: Serotonin (5-hydroxytryptamine). Physiol. Rev., 1954, **34**, 563.
35. Comroe, J. H., Jr., Van Lingen, B., Stroud, R. C., and Roncoroni, A.: Reflex and direct cardiopulmonary effects of 5-OH-tryptamine (serotonin). Am. J. Physiol., 1953, **173**, 379.
36. Correll, J. T., Lyth, L. F., Long, S., and Vanderpoel, J. C.: Some physiologic responses to 5-hydroxytryptamine creatinine sulfate. Ibid., 1952, **169**, 537.
37. Page, I. H., and McCubbin, J. W.: Variable arterial pressure response to serotonin in laboratory animals and man. Circulation Res., 1953, **1**, 354.
38. Reid, G.: Circulatory effects of 5-hydroxytryptamine. J. Physiol., 1952, **118**, 435.
39. Zucker, M. B.: Platelet agglutination and vasoconstriction as factors in spontaneous hemostasis in normal, thrombocytopenic, heparinized and hypoprothrombinemic rats. Am. J. Physiol., 1947, **148**, 275
40. Fenichel, R. L., and Seegers, W. H.: Bovine platelets, serotonin and retraction of bovine plasma clots. Ibid., 1955, **181**, 19.
41. Reid, G., and Rand, M.: Pharmacological actions of synthetic 5-hydroxytryptamine (serotonin, thrombocytin). Nature, London, 1952, **169**, 801.
42. Woolley, D. W., and Shaw, E.: Some neurophysiological aspects of serotonin. Brit. M. J., 1954, **2**, 122.
43. Sjoerdsma, A., and Udenfriend, S.: Studies on indole metabolism in patients with malignant carcinoid (argentaffinoma). J. Clin. Invest., 1955, **34**, 914.
44. Ransom, W. B.: Case of primary carcinoma of ileum. Lancet, 1890, **2**, 1020.
45. Bean, W. B., Olch, D., and Weinberg, H. B.: Syndrome of carcinoid and acquired valve lesions of right side of heart. Circulation, 1955, **12**, 1.
46. Cassidy, M. A.: Abdominal carcinomatosis with probable adrenal involvement. Proc. Roy. Soc. Med., 1930, **24**, 139.
47. Cassidy, M. A.: Postmortem findings in case shown on October 10, 1930, as one of abdominal carcinomatosis with probable adrenal involvement. Ibid., 1931, **24**, 920.
48. Cassidy, M. A.: Abdominal carcinomatosis associated with vasomotor disturbances. Ibid., 1934, **27**, 220.
49. Hedinger, C., and Gloor, R.: Metastierende Dünndarmkarzinoide, Tricuspidalklappenveränderungen und Pulmonalstenose, ein neues Syndrom. Schweiz. med. Wchnschr., 1954, **84**, 942.
50. Branwood, A. W., and Bain, A. D.: Carcinoid tumor of small intestine with hepatic metastases, pulmonary stenosis and atypical cyanosis. Lancet, 1954, **2**, 1259.
51. Jenkins, J. S., and Butcher, P. J.: Malignant argentaffinoma with cyanosis and pulmonary stenosis. Ibid., 1955, **1**, 331.
52. Ratzenhofer, M., and Lembeck, F.: Über den Gehalt an 5-Oxytryptamin in Carcinoiden des Darmtraktes. Ztschr. Krebsforsch., 1954, **60**, 169.
53. Carlsen, K. D., and Søndergaard, T.: Malignant carcinoid of small intestine with pulmonary stenosis; possibility of serotonin-producing tumor. Ugesk. laeger., 1955, **117**, 639.
54. Olesen, K. H.: Carcinoid of small intestine; cases complicated by liver metastases, right cardiac valvular defect and unusual form of cyanosis—a new syndrome. Ibid., 1955, **117**, 635.
55. Hanson, A., and Serin, F.: Determination of 5-hydroxyindoleacetic acid in urine and its excretion in patients with malignant carcinoids. Lancet, 1955, **2**, 1359.
56. Arnett, J. H., and Long, C. F.: Case of congenital stenosis of pulmonary valve, with late onset of cyanosis: death from carcinoma of pancreas. Am. J. M. Sc., 1931, **182**, 212.
57. Fraser, I.: Argentaffinoma (carcinoid tumor) with cyanosis. Lancet, 1955, **2**, 174.
58. Dockerty, M. B., and Scheifley, C. H.: Metastasizing carcinoid; report of an unusual case with episodic cyanosis. Am. J. Clin. Path., 1955, **25**, 770.
59. Daugherty, G. W., Manger, W. M., Roth, G. M., Flock, E. V., Childs, D. S., Jr., and Waugh, J. M.: Malignant carcinoid with hyperserotonemia occurring spontaneously or induced by palpation of tumor or by intravenous histamine; report of case. Proc. Staff Meet. Mayo Clin., 1955, **30**, 595.
60. Bleehen, N. M.: Precipitation by fatty food of systemic disturbances from argentaffinoma. Lancet, 1955, **2**, 1362.

CHLORPROMAZINE AND RESERPINE

Symposium on Experiences at Saint Elizabeths Hospital*

WINFRED OVERHOLSER, M.D.
FRANCIS N. WALDROP, M.D.
F. REGIS RIESENMAN, M.D.
THEODORE C. C. FONG, M.D.
OTIS R. FARLEY. M.D.
JAY L. HOFFMAN, M.D.
Saint Elizabeths Hospital, Washington

INTRODUCTORY REMARKS

WINFRED OVERHOLSER, M.D.
Superintendent

It is a pleasure to welcome to St. Elizabeths Hospital this regular meeting of the Medical Society of the District of Columbia. By accepting our invitation you honor the Hospital and mark with us an occasion of observing the centennial year of the Hospital. Through the past century St. Elizabeths Hospital has served the District of Columbia, and many of our physicians have been active and participating members of the Society. It is our hope that, as psychiatry receives growing recognition as an integral part of medicine, closer union may be symbolized by other meetings of the Society at St. Elizabeths Hospital.

During the past 2 years much has been heard in the medical and the popular press about the new "tranquilizing" drugs, especially as they are employed in psychiatric practice. Their use is not limited to the field of psychiatry, but it is there that the highest hopes and most enthusiastic claims have been expressed. Whatever the ultimate verdict, there is no doubt that a new approach, a pharmacologic one, seems to have opened up. In planning this program it has seemed to us that a subject of this sort might be of interest to a general medical group such as you constitute. Four of the members of our staff will present their observations as to the results of 2 of these drugs, chlorpromazine (Thorazine) and reserpine (Serpasil). Finally, certain general conclusions will be given in a summary by Dr. Hoffman.

Chlorpromazine, already mentioned, was synthesized by the Rhône-Poulenc Laboratories in France in 1952; it is one of the group generally denominated antihistaminic but has certain fairly specific qualities. It is marketed in this country by Smith, Kline & French Laboratories under the trade name of Thorazine.

Reserpine, the other drug to be discussed, is an active alkaloid of the East Indian snakeroot, *Rauwolfia serpentina*. The root has been used for centuries in India, largely on an empirical basis; the alkaloid referred to was isolated by the Ciba laboratories in 1952. It is marketed by them under the name of Serpasil; several other laboratories provide it under various names, either alone or in combination with other sedatives.

Both Smith, Kline & French and the Ciba Pharmaceutical Products, Inc. have been most generous in supplying the Hospital with the drugs for clinical trial, and our thanks are hereby expressed to them.

With these preliminary remarks I now turn the program over to my associates, and call first on Dr. Francis N. Waldrop, who is in charge of one of our psychiatric services.

---

* Presented at a meeting of the Medical Society of the District of Columbia held at St. Elizabeths Hospital in Washington, D. C., November 9, 1955.

RESERPINE

FRANCIS N. WALDROP, M.D.

Acting Chief, West Lodge Psychiatric Service

The use of reserpine in the treatment of mentally ill patients was introduced in St. Elizabeths Hospital a little more than a year ago. Since that time approximately 700 patients have been administered this drug for a period of at least 1 month. As a rule, patients were selected, not by their psychiatric diagnosis, but on the symptomatic criteria that they were agitated, destructive, assaultive, noisy, combative, and overactive. Most of the patients selected on this basis suffered from psychotic illnesses, and most had been sick for a period of several years, the range extending from a month or less to more than 20 years. Contraindications to treatment included the history or presence of a gastrointestinal bleeding disorder, particularly peptic ulcer, malignant hypertension, and the presence of pronounced depressive features in the psychiatric picture.

In a majority of the patients the medication was given orally from the first; however, in uncoöperative and resistive patients the medication was begun by intramuscular injections. The average beginning dosage, by either oral or parenteral route, was from 2 to 2.5 mg. daily. For a period ranging from 1 to 3 weeks this dosage was gradually built up to a maximum of from 5 to 10 mg. daily. In most instances patients were maintained on the maximum dosage level, barring serious side-reactions, until a tranquilizing effect was achieved or until it was thought that they showed no promise of response. In some instances the maximum dosage of up to 10 mg. daily was maintained for a period of 6 to 8 months before sufficient improvement occurred to warrant reduction of dosage. With those patients who showed a marked diminution in their overactivity, anger, and agitation, or who developed severe parkinsonian symptoms, the dosage was reduced more promptly. The maintenance dosage, once the tranquilizing effect has been achieved, has varied widely from patient to patient and must be adjusted individually in most cases. Maintenance dosages in this group of patients have varied from 0.5 mg. daily to 9 or 10 mg. daily, with an average of 2 mg. daily.

Because of the variability with which the drug has been used from service to service within the Hospital, it is difficult to assess in a precise way just what have been the effects of treatment with reserpine. In general, about 13 per cent (91) of the total 700 patients failed to show any favorable response after a full month of treatment. This group included a considerable number of patients who have been hospitalized for a period of more than 5 years and who show advanced symptoms of profound mental illness. In many of these instances the patient's illness had apparently reached a sort of stabilization over a long period. It would appear that the longer a patient has been ill, the longer he must receive reserpine and the higher the dosage must be in order to achieve a favorable response. It is not unlikely that a portion of those patients who failed to respond even after 1 to 3 months would eventually have shown a favorable reaction had the drug been continued over a longer period and/or a higher dosage used.

In approximately 62 per cent of patients (or 435) a conspicuous and favorable response was noted in that they became more tractable, placid, coöperative, less tense and active, and quieter. Although these patients showed a definite tranquilizing effect with regard to some of their more obvious symptoms, examination still revealed a persistent underlying core of illness, as indicated by persistent hallucinations, delusions, confusion, disorientation, and faulty emotional responses. Many of the patients in this group are still under treatment, and it is possible that they will eventually show more improvement.

About 25 per cent of the patients treated (or 174) have definitely shown more than a mere tranquilizing effect. The patients in this group have not only become quieter, more coöperative, and less tense and anxious, but have also shown a gradual diminution in abnormal content; i.e., hallucinated voices have gradually receded and in many instances entirely disappeared, bizarre delusions have gradually faded away, and the patients have taken a progressive interest in the real world about them, have been able to deal more constructively with their real problems and able to participate effectively in some sort of rehabilitation program. Nearly all of the patients in this group have suffered from schizophrenia of one variety or another. Patients with organic brain disease, such as those suffering from paresis, cerebral arteriosclerosis, cortical atrophy, and related difficulties, have almost uniformly shown marked improvement in the superimposed psychologic aspects of their difficulties (including agitation, noisiness, overactivity, destructiveness), although they continue to show the deficit symptoms (i.e., memory and intellectual defects) to be expected in the brain-damaged individual.

About 10 per cent (or 75) of the patients who have received reserpine have shown sufficient improvement to date to be discharged or placed on extended visit (these are included in the 25 per cent who have shown more than a tranquilizing response), but the number involved is too small as yet, and the time period too brief, to regard this figure as having any final validity. Even without many discharges so far, a considerable number of patients receiving the drug have enjoyed benefits short of "recovery"—benefits which are extremely difficult to quantitate. Further, while it is believed that reserpine has certainly played a part in the improvement shown by these patients, it would be premature at this time to attribute the beneficial changes exclusively to reserpine.

It is expected that the percentages in the above categories will shift considerably as more patients receive the drug for longer periods and as our criteria for selecting patients for this treatment improve. Some patients who at this time have been treated only 1 to 2 months and have thus far shown little or no response may well progress in the course of the next 3 or 4 months to a point warranting their classification as markedly improved. It also seems quite likely that a number who have already shown a definite amelioration in their symptoms will be favorably considered for visit or discharge in the near future.

In general, when a patient has shown sufficient improvement to be considered for visit or discharge from the hospital, reserpine has first been discontinued. It has not been customary, except on one service, to continue the patient on the drug after he has been placed on extended visit or discharged. As our experience with this form of treatment increases, however, we may find it feasible to discharge or place on visit patients who have a favorable social situation on the outside and who will require an indefinite maintenance dosage of reserpine for control of their more disruptive symptoms (just as epileptic patients may require indefinite use of anticonvulsants).

About 40 per cent of the patients who have received the drug for at least 1 month and in whom the treatment has been terminated after a favorable response have shown a partial or complete relapse to their previously disturbed state. No consistent pattern has yet emerged which enables us to predict reliably which patients are likely to relapse in a relatively short period and which are not. A few patients, after a favorable response and termination of the drug, have maintained their improvement for as long as 6 months and are still doing well.

A great deal more work will be needed before we can begin to talk meaningfully about how long a patient should be kept on a maintenance dose, which patients are likely to relapse, and how soon, and which patients will be able to dispense with the drug altogether after a favorable response. We are really just entering this area of experience, and it is not yet possible to draw any valid conclusions. In general, our practice so far has been the following: After a patient has shown a favorable response the dosage is gradually reduced to successive maintenance levels over a period of 1 to 3 months. If the patient continues to do well even on minimal doses, the drug is terminated. As a general rule, relapse occurs 1 to 2 weeks after the drug is discontinued. In most instances the patients who relapse are then restarted on the drug, their symptoms are again brought under control, and the lowest possible maintenance dose is individually arrived at.

With regard to side-reactions and complications of reserpine treatment, 7 per cent (or 50) were discontinued because of somatic side-reactions. It is interesting to note that by far the greater number of serious side-reactions occurred in women and that in no instance, other than geriatric patients, did a precipitous fall in blood pressure develop. Exclusive of the geriatric group, 4 patients died while receiving reserpine, but these deaths were not necessarily the result of reserpine administration. Dr. Farley will elaborate on this matter and discuss the somatic side-reactions in greater detail. In 4 per cent (or 31 patients) reserpine treatment was discontinued because of psychiatric complications, nearly always the appearance of depression or a toxic confusional state. Parkinsonian symptoms have rarely required discontinuance of the drug, although in many instances it has been necessary to reduce the dosage slightly. Parkinsonian symptoms appear almost uniformly if the drug is given in high dosage and for a long period, and they seem to represent a normal pharmacologic action of the drug.

In summary, our experiences with reserpine justify a cautious optimism with regard to its effect on the hospitalized, mentally ill patient who is overactive, tense, angry, combative, destructive, and assaultive. About two-thirds of such patients can be helped to the extent that these difficult symptoms are significantly reduced, thus rendering the patient more comfortable, more coöperative, and more amenable to other forms of treatment. In about one-fourth of the patients treated with the drug the beneficial effect appears to have transcended a mere tranquilizing response, and patients have shown significant improvement with regard to their abnormal mental content.

Finally, I should like to point out that there appears little justification as yet for regarding reserpine as a definitive or curative treatment for any form of mental illness. Unquestionably, a great deal enters into the treatment response of a mentally ill patient other than the purely pharmacologic effect of the drug. At this time reserpine appears to be of great value within the mental hospital as an adjunctive form of therapy which facilitates a patient's participation in a broader treatment program, including individual and group psychotherapy, occupational therapy, and vocational rehabilitation.

CHLORPROMAZINE

F. REGIS RIESENMAN, M.D.

Assistant Chief Medical Officer, Women's Receiving Service

Chlorpromazine, or Thorazine, therapy was instituted on the Women's Receiving Service of Saint Elizabeths Hospital on July 19, 1954. As of November 1, 1955, 280 patients have been treated with Thorazine on Women's Receiving Service and a total of over 1,000 in the Hospital as a whole.

Criteria for selection of patients were based mainly on the behavior of the patients. The most excited and disturbed, hyperactive, assaultive, combative, angry, noisy and confused patients were selected, irrespective of diagnosis. Later, a smaller group of patients was considered from the standpoint of diagnostic categories in order to have a well represented group that would enable us more fully to evaluate the efficacy of the drug in a comparative sense.

The therapeutic regimen, in general, was as follows:

The drug was administered in gradually increasing doses, starting with 50 mg. intramuscularly on the first day, increasing by 50 mg. each day until 150 mg. a day was reached. The 150 mg. a day was given in divided doses intramuscularly until the patient was controlled and cooperative. The drug was then given by mouth, 100 mg. 3 times a day. From this point on the dosage of the drug was individualized for each patient, both with respect to total dosage and to duration of treatment. The physiologic effects of the drug included a drop in blood pressure, varying from 10 to 40 mm. systolic and 10 to 20 mm. diastolic. There was distinct pallor in a number of patients. Most of the patients were drowsy during the first 7 to 10 days. Some of them complained of constipation, stuffiness of the nose, and dryness of the throat. The average daily dose for acute patients was 400 mg. and for the chronic patients, 600 mg. The maintenance dosage varied from 50 mg. to 300 mg., with an average of approximately 150 mg. The average duration of treatment was 2 to 3 months for acute cases and 3 to 5 months for chronic cases.

The complications with Thorazine were as follows:

Eleven patients developed jaundice, 17 a parkinsonian syndrome, 9 dermatitis, 1 hyperthermia, 1 hypothermia, and 2 muscular dystonia. All these complications forced the discontinuance of the drug except for 6 patients with dermatitis. We no longer discontinue the drug in the parkinsonian states but give Cogentin.

The drug was effective in achieving control and management in 95 per cent of the patients. This meant that they became quieter, coöperative, cared for their own needs, and no longer required seclusion. There was failure, however, to show any favorable response beyond that point in one-third, and another one-third showed mild to moderate improvement; the remaining one-third were markedly improved or underwent complete remission, and these patients have either been discharged or are at present on trial visit.

By far the most favorable response was found in the noisy, overactive, angry, combative and assaultive type of patient. Patients with a lot of anxiety, tension, and concern likewise showed favorable response. The patients showing the poorest response to the drug were mainly the depressives and the retarded, passive, dependent type of schizophrenics. Patients who showed an attitude of indifference or lack of concern, and more or less accepted their illness with complacency, likewise responded poorly.

Some specific characteristics of the drug which are worthy of mention are as follows:

The drug is not habit-forming. Patients may develop a tolerance to the drug if the administration of the drug is not properly regulated, both with respect to dosage and to time. The drug is practically a specific as a tranquilizer, without penalizing the intellectual and perceptional senses and inducing a hypnotic effect or clouding of consciousness, as other sedatives do. It is important to maintain control of the patient at all times, since once control is lost it may be difficult to regain. Although the *modus operandi* is not known, it apparently facilitates repressive mechanisms in the paranoid schizophrenics and creates a feeling of emotional indifference in many patients, so that patients appear to be no longer concerned with their problems and the anxiety is relieved. In this respect, it acts as a chemical lobotomy.

Maintenance doses of the drug are required in practically all cases of paranoid schizophrenic and manic-depressive manic patients. This is good insurance against a relapse. In many patients the maximum degree of responsiveness to the drug may not be obtained or achieved until 1 to 3 months after the termination of the drug, or after cutting the drug to a maintenance dosage. This is the so-called therapeutic lag that is quite characteristic in many cases.

Some 10 per cent of the patients complain of peculiar feelings and somatic disturbances. They are variously described as feelings of depersonalization or somatic disorientation; a feeling of strangeness, peculiar feelings, being out of contact, a feeling of being driven or being restless, anxious and tense; a feeling as if the mind were detached from the body, and a feeling of lethargy and weakness. Some describe their feelings as walking on crushed ice or ice cubes, a feeling as if they were suspended in space or dangling in mid-air. Some of them complain that they are unable to get into a comfortable position, irrespective of whether they are sitting, standing or lying. Others feel that they are the living dead and act more or less like zombies.

When the drug has achieved maximum therapeutic benefit, the patients describe their feelings as follows: "I have a feeling of peace of mind, a feeling of inner contentment, a feeling of complete confidence in myself."

Thus, Thorazine appears to be practically a specific in the control and management of very disturbed patients. Most of the patients receiving the drug are made more accessible, amenable, and receptive to psychotherapy, as well as to other forms of therapy available in an institutional setting. There is a better morale on the ward. The ward climate undergoes a remarkable transition. Wards become quiet, seclusion is reduced to a minimum, and relatively few injuries occur. The patients seem relaxed, agreeable, pleasant and coöperative. Privileges are accepted and responsibilities assumed. There is considerable interest and enthusiasm shown by the patients in the various activities in which they participate. Interpersonal relationships are improved. Ward personnel are more effectively utilized, and their efforts are channelized and directed toward more constructive goals.

In conclusion, it appears that Thorazine has a definite place and value in the therapeutic armamentarium of mental illness, and as such becomes a valuable aid or adjunct to psychotherapy. The full impact of chemotherapy in psychiatry (the era of pills for mental ills) with respect to its over-all potentialities and efficiency cannot be properly evaluated at this time. The drug, having passed the "acid test" in the experimental and empirical phase, is faced with a third and more important phase, namely, the test of time. We still must view it in a speculative manner and with certain reservations. The integration of chemotherapy and psychotherapy will be a task of psychiatry in the future.

CHLORPROMAZINE AND RESERPINE IN GERIATRIC PATIENTS

THEODORE C. C. FONG, M.D.

Chief, Geriatric Service

With the ever-increasing interest in the field of geriatric medicine, any therapeutic agent which might be of value in the treatment of this group should be considered. The impact of aging in the field of psychiatry is fast becoming an important problem. Today 25 to 35 per cent of initial admissions to mental institutions are in this category. In the past only limited therapy, other than custodial, could be given to this group of patients. With the span of life increasing, steps must be taken either to anticipate or prevent pathologic changes in the human organism. In part, this requires early indoctrination by educational and other means. Unfortunately, this cannot be accomplished when patients have reached the geriatric age group, and then ways and means must be discovered to aid these individuals. With the development of the tranquilizing drugs, we are of the opinion that some benefit can be derived by the employment of these agents.

Although our experiences have been limited in this particular group of patients, we are happy to state that results have been quite promising and that several patients who have been on these drugs are now on trial visit. Since the majority of the patients admitted to the Geriatric Service represent advanced cases of senility, with concomitant mental findings, we believe that better results might be obtained with senile patients treated by the physician in general practice. The early emotional changes, such as confusion, restlessness, agitation, irritability, insomnia, night wanderings, forgetfulness, incontinence and anxiety, are all symptoms that can be benefited to a greater or lesser degree by these agents. Since our patients consist principally of those who have been treated by private physicians or who have been in nursing homes, effective results are not as apparent as one would find in earlier cases coming to the attention of practicing physicians.

Personnel on the Geriatric Service have noted the effect of these drugs on patients and are most enthusiastic in their comments. They believe that a large amount of the drudgery and the hopelessness in the care of these patients can be eliminated by their use. The improvement as shown by some patients is encouraging, and this fact makes for better employee and patient morale.

Reserpine (Serpasil) was first used on the Geriatric Service in October, 1954 and has been in continuous use since that date. Chlorpromazine (Thorazine) was employed first in May of 1955. Both of these drugs have been effective in lessening patient agitation, thereby allowing the nurse more time for patient therapy and other nursing duties. Patients who have been on these drugs are less apprehensive, less tense, sleep better, and show increased appetites. Agitated and destructive patients are no longer destructive and hyperactive. Noisy and disturbed patients become quiet and coöperative. A total of 31 patients have been on chlorpromazine (Thorazine) at one time or another. Some of these could not be adequately followed because of transfer to other services, and 1 patient in this group has since died.

At the present time 12 are still under observation. Originally 20 geriatric patients were placed on reserpine (Serpasil) as part of a joint study of 108 patients. These patients varied in age from 51 to 91, with a median age of 73. Chlorpromazine (Thorazine) patients ranged in age from 62 to 82, with a median age of 71 years and 6 months. Patients on reserpine (Serpasil) were diagnosed principally as chronic brain syndrome with cerebral arteriosclerosis, and senile psychoses. Those in the chlorpromazine (Thorazine) group were diagnosed similarly, and, in addition, there were 4 cases of manic depressive reaction and a case of schizophrenic reaction, paranoid type, in a patient in this Hospital for 27 years.

At the present time 18 patients are on reserpine (Serpasil) therapy. The patients on this drug were generally noted to become drowsy but were responsive when addressed. There was amelioration in their behavior, but the time required for improvement was usually longer than that noted with the administration of chlorpromazine (Thorazine). Some patients have continued their improvement without maintenance doses, while others have required maintenance doses. This drug should not be regarded as a panacea, because we have noted that in some instances very little response was obtained, particularly with reserpine (Serpasil). It is our impression that the patients most responsive to these drugs, in the upper age brackets, are those manifesting increased anxiety, agitation, destructive tendencies and assaultiveness. Thus far we have noted that the arteriosclerotic patients have shown better response than those diagnosed as senile psychosis.

The most dramatic results have been obtained in the elderly patients with chronic manic depressive reaction in the manic phase of their illness. One patient, an arteriosclerotic psychotic woman with intractable neuritic pains, became greatly relieved of pain and also showed some mental improvement. She became more affable and less demanding and irritable.

The duration of treatment varies with the individual, and thus far we have been unable to establish definite criteria. The highest dose of reserpine (Serpasil) employed was 15 mg. This drug can be given either in tablet or liquid form. The liquid preparation for psychiatric use contains 1 mg. to each 4 c.c. The highest dose of chlorpromazine (Thorazine) employed to date has been 500 mg. These are daily amounts and are usually given in divided doses.

The principal complications that have been noted to date with reserpine (Serpasil) have been hypotension, lethargy, mild diarrhea and nasal congestion. The complications in the small group treated with chlorpromazine have been 1 case of urticaria, 1 case of mild jaundice, and 1 case of leukopenia, in which the white blood cell count decreased to 2,500 but in which special treatment was not required. In this particular case the white blood cell count returned to normal within 2 weeks. In some cases dryness of the mouth occurs. In 1 patient, a parkinsonian syndrome developed. The present opinion is that parkinsonian manifestations are not a contraindication to the further employment of chlorpromazine (Thorazine). Cogentin, a drug employed in the treatment of paralysis agitans, can be used along with this drug in doses of 1 to 2 mg. 3 or 4 times a day. Complications, as noted above, occurred during varying periods of treatment. All the complications noted cleared up following discontinuance of medication. One of the patients developed severe hypotension, with a systolic reading of 60 mm. She developed this within 15 hours following the initial dose of 2 mg. of reserpine (Serpasil). She was a patient with arteriosclerotic cardiovascular disease.

It is generally stated that these drugs should be used with care in elderly patients, particularly in those who show unstable vascular systems or who have had a previous history of myocardial disorders. Clinical results can best be achieved by gradually and carefully increasing dosage until maximum improvement is obtained. We believe that dosage should be maintained at that level for some 2 weeks and then gradually reduced until the proper maintenance dose is reached or until the drug can be discontinued.

We should like to mention briefly the results in 2 patients treated with chlorpromazine (Thorazine). The first one is an ambulatory, obese, white woman of 78 who was readmitted to St. Elizabeths Hospital for the seventh time on June 30, 1955. Her diagnoses on previous occasions had been manic depressive reaction, manic phase. On this admission she was described as impulsive, aggressive, euphoric, noisy and belligerent. In addition, she was denuditive, destructive and untidy in her habits. For a brief period of time she required seclusion because of her assaultive and destructive tendencies. She was initially placed on reserpine (Serpasil) on July 9, 1955 with a daily dose of 2 mg. This was later increased to a total of 7 mg. She continued to be hyperactive, noisy and destructive. Since this patient failed to show response following a month's use of reserpine (Serpasil), she was started on chlorpromazine (Thorazine) on August 7, 1955, with an initial daily dose of 50 mg. intramuscularly, and the dose was later increased to 400 mg. orally. On September 22 the patient assisted with small tasks on the ward, was quiet, coöperative, tidy and able to care for her own needs. On October 18 she was permitted home visits. She remains on 400 mg. of chlorpromazine (Thorazine). Her son, in his remarks to the physician, stated this was the first time in his memory that his mother had responded, following one of her manic episodes, in such a short period of time.

The second case is that of a 62-year-old, nonambulatory, colored woman who was admitted to this Hospital on November 8, 1949. Since her admission here she has been very resentful, hostile and irritable. When interviewed she was profane, obscene, and at times assaultive to other patients. She was placed on chlorpromazine (Thorazine) on May 16, 1955 with an initial daily dose of 50 mg., which was progressively increased to a total of 150 mg. daily. At the start of her treatment she weighed 117 pounds. Her last weight, taken recently, was 134 pounds. The blood pressure fluctuated while on treatment from a low of 100/62 to a high of 138/76. Her initial response to therapy occurred on June 6. She appeared more cheerful and would sing often. On June 25 it was noted by the nurses that she no longer employed profanity and was more affable and coöperative. At the present time she attends group activities and church services and recently joined the group therapy sessions. She has continued to maintain her improvement on a daily dosage of 50 mg.

In summation, we feel that in the geriatric group of patients suffering with mental illnesses both chlorpromazine (Thorazine) and reserpine (Serpasil) are effective in controlling anxiety, agitation, assaultiveness and destructiveness, with chlorpromazine (Thorazine) producing the more rapid and striking effects. Irrespective of whether these illnesses are attributable to functional or organic factors, these drugs are far better, in our estimation, than the employment of barbiturates, which add confusion to already confused patients. There is no additional clouding of the mental processes. Patients become quiet and coöperative, with improvement in behavior to the degree at which they are more amenable to nursing care, require much less seclusion, and are able to participate in social and other group activities. In view of this improvement, they are less disturbing to other patients on the ward. Undoubtedly the employment of these drugs has improved the ward climate. They have contributed immeasurably to the better management of geriatric psychiatric patients.

COMPLICATIONS AND CONCOMITANTS

OTIS R. FARLEY, M.D.

Chief of Medical Service

It is my pleasure tonight to discuss the clinical and laboratory data of those patients admitted to the Medical and Surgical Division during the past 13 months with significant concomitants or complications incident to treatment with Serpasil or chlorpromazine. I will also very briefly discuss certain highlights of our use of these drugs in patients within the Medical and Surgical Division or the Tuberculosis Service. Incident to the presentation I shall try to point out certain observations and impressions we have developed that seem to be of value as guides to better and safer use of the two drugs.

One or the other or both drugs have been administered during the past 13 months to a total of almost 2,000 patients. The dosage in most cases has been continued over a period of 60 days or more in each patient treated. In general, Serpasil has been given in divided doses 2 times daily and chlorpromazine in doses 3 times daily. The individual doses of Serpasil have varied from fractions of 1 mg. per day to 12 or more mg. daily in a few cases. The dosages of chlorpromazine have varied from 75 mg. per day in some medical patients to 1,200 mg. or more per day in some psychiatric patients.

Based on available experience in the use of Serpasil in the treatment of hypertension, Serpasil was administered to no patient known to have malignant hypertension with azotemia, nor was it given to any patient known to have an active peptic ulcer or other potential bleeding lesion of the gastrointestinal tract.

It should be stated that the physicians throughout the Hospital have, for the most part, a tremendous respect for both of these drugs because of their extreme potency. Almost without exception they have been highly suspicious of potential complications from the use of either of the drugs. Because of this respect and low threshold of suspicion, most of the patients with significant complications were referred to the Medical and Surgical Division for observation and treatment.

For convenience' sake, I will discuss first the data in regard to the Serpasil-treated cases; second, the chlorpromazine-treated cases, and then briefly the experience of the Medical and Surgical Service staff in the use of the drugs within the Medical and Surgical Division and the Tuberculosis Service. In conclusion, I will point out what appear to be pertinent observations and impressions to be derived from our experience with the 2 drugs.

Among the Serpasil-treated patients, 3 aged women were admitted to the Medical and Surgical Division in varying degrees of acute weakness, inertia, apathy and hypotension. In each of these patients the symptom complex was of sudden onset and responded promptly to symptomatic and supportive treatment.

Two patients were admitted to the Service with urticarial dermatitis of insidious onset during Serpasil therapy. One of these showed a positive intradermal reaction to the drug and the other was not tested. Both patients cleared up rather promptly on cessation of the therapy. Three patients were admitted to the Service with generalized edema of severe degree. Two of these reactions occurred in association with congestive heart failure and 1 occurred in a patient with far advanced myxedema.

One patient was admitted for observation because of a massive lower gastrointestinal tract hemorrhage. The hemorrhage was not recurrent, and after extensive study we were unable to find the site of the bleeding. One patient was admitted in profound shock and failed to respond to supportive measures.

One young man died suddenly on the Psychiatric Service after a few days of Serpasil therapy and is included in this group for the sake of completeness.

Among the patients described above there were 4 deaths. All of these patients were carefully examined at autopsy. The patient with myxedema and generalized edema was found at autopsy to have a generalized severe septicemia and a phlegmonous cellulitis of the soft tissues of the mouth and neck.

The patient with the profound shock was found to have a massive perforation and bleeding of a duodenal ulcer. One of the patients was found to have severe congestive heart failure which failed to respond to digitalis and diuretics and supportive measures. The myocardium showed generalized brown atrophy.

The patient who died suddenly on the Psychiatric Service was found to have generalized congestive phenomena of all the viscera, including the kidneys.

Careful consideration of the deaths in this group leads us to believe that the sudden death occurring in the young man was probably not related to Serpasil therapy except in so far as Serpasil masked the recognizable signs of impending renal failure in a hyperactive, confused young psychotic.

The case of the myxedema patient with the terminal septicemia was complicated by the fact that she had had a similar exacerbation of edema previously on the initiation of Thorazine therapy. It is well recognized in medical circles that myxedema patients respond in bizarre and sometimes hazardous fashion to many drugs, including narcotics, barbiturates and sometimes even salicylates, and we think the death in this case could be attributed to Serpasil only in so far as it constitutes a bizarre reaction to a drug, and in so far as the seriousness of her illness was masked in some measure by the ataractic effect of Serpasil.

We think it quite likely that the bleeding and perforation of a duodenal ulcer which proved fatal can be justly attributed to Serpasil therapy. Unfortunately, we were unable to elicit any history from this patient or her family that gave a clue to the presence of a duodenal ulcer prior to the institution of therapy.

The death of the patient in congestive heart failure while he was simultaneously receiving Serpasil in some measure supports our suspicion that Serpasil complicates edema states due to other causes.

In reviewing the second group of patients, namely, those with symptoms incident to Thorazine therapy, we find a wider range of complications which included the following. Eleven patients were admitted with jaundice. Each of these showed elevation of the alkaline phosphatase, elevation of serum bilirubin both in the direct and indirect fractions, and little or no clues to hepatocellular damage.

Because of the atypical nature of the jaundice in 1 case, an exploratory celiotomy was accomplished early in the course of her disease, at which time the liver and biliary tract were found to be within normal limits on gross inspection; and the liver biopsy showed nondescript changes including some bile stasis in the canaliculi. She developed intercurrent paratyphoid enteritis. This patient is at the moment profoundly cachectic and has required colostomy for idiopathic low bowel obstruction; it is our impression that she suffers intrahepatic biliary obstruction, probably due to causes other than chlorpromazine therapy, but in the last analysis the diagnosis is as yet unknown and she must be considered a potential complication of chlorpromazine therapy.

Four patients were admitted with hypothermia, hypotension and depression of consciousness of a variable degree. Ten patients were admitted with dermatitis of moderate to severe character. In 6 of these patients the dermatitis was clearly of a photosensitive nature. In all patients considerable edema of skin area involved also was noted. Four patients were admitted with fever alone.

Six patients were admitted with variable degrees of leukopenia or agranulocytosis or developed the symptom-complex while in the Medical and Surgical Division. One of these latter cases is included only for the sake of completeness since the patient also had advanced carcinomatosis with bone marrow depression, and had a significant degree of agranulocytosis due to her carcinomatosis and the phosphoramid therapy being given for her malignant disease prior to the institution of chlorpromazine therapy. A second patient in this group developed the agranulocytic reaction while simultaneously receiving both propylthiouracil and chlorpromazine and showed a prompt remission on discontinuance of both drugs. We think it likely that both of these patients developed their agranulocytosis, at least in part, due to causes other than chlorpromazine therapy. Of the remaining 3 patients, 1 died shortly after admission and before the effects of supportive and substitution therapy could be brought to bear. The others recovered after a reasonably short interval of supportive therapy with cortisone, ACTH and antibiotics.

We have had occasion to use reserpine or chlorpromazine in 36 psychiatric patients who also had pulmonary tuberculosis, many of whom were simultaneously receiving streptomycin, PAS and/or isoniazid. The indications for the use of the drug and the results of the use of the drug in these patients are approximately those described by Dr. Waldrop and Dr. Riesenman in their series of patients. In one of these patients we noted the appearance of fever and sore throat and a leukopenia with a fall in the total white blood cell count to 3,350 but with no significant disproportion in the cell constituents of the total count. In this patient the fever, the leukopenia, and the sore throat remitted when the dose of the drug was cut in approximately half, and it was not necessary for that reason to discontinue the drug.

We carried 1 grossly psychotic patient through a full-term pregnancy and to remission of psychosis and delivered a viable, healthy infant in spite of otherwise intractable hyperemesis gravidarum, and in spite of a known history of postoperative hyoparathyroidism. It is worthy of note that both the mother and the child are out of the hospital at the moment and apparently doing very well.

Within the Medical and Surgical Service we have had occasion to use the ataractic drugs for control of anxiety, agitation, hostility and overactivity, particularly in those patients in whom those symptoms interfered with nutrition, and with about the same results that have been described by Dr. Riesenman and Dr. Waldrop.

We have used chlorpromazine in conventional doses for the treatment of radiation sickness and nausea and vomiting due to other causes, including the nausea and vomiting of uremia. In 1 case we used the drug for control of anxiety and pain in a hopeless terminal patient with carcinomatosis. This patient has been referred to elsewhere under the discussion of chlorpromazine treatment in patients and represents 1 of our fatalities.

Based on clinical, laboratory and/or autopsy data in the cases studied, we believe the following observations to be pertinent:

1. Lesions of the gastrointestinal tract are prone to bleed under the stimulus of Serpasil therapy and should be considered relative or absolute contraindications to the use of the drug, until or unless further evidence is accumulated that speaks to the contrary.

2. We believe that Serpasil acts in some way to aggravate or exacerbate the derangement of salt and water metabolism or excretion in patients predisposed to edema for other reasons and that the drug should be given with caution to patients with hypothyroidism or myxedema and those with edema states due to congestive heart failure, renal failure or cirrhosis.

3. The sedative and ataractic effect of Serpasil may appear abruptly and in profound degree in patients with organic brain disease, including those with arteriosclerosis and traumatic brain disease, but this complication is readily reversible when recognized and does not constitute a contraindication to the use of the drug.

4. Both drugs modify the subjective response of patients to a point where they tend to mask the symptoms of intercurrent medical and surgical illness, and in some cases they complicate the diagnosis of other diseases to a significant degree. In our experience the single most striking effect in all patients receiving adequate doses of Serpasil is the marked slowing of the heart that goes along with such therapy. This slowing of the heart persists in the presence of congestive heart failure in some cases and in some cases of shock and profoundly alters the conventional signs of disturbance of intracranial pressure.

5. Both drugs produce in adequately treated patients a reaction pattern that in some ways mimics the witzelsucht seen in lobotomized patients so that they are prone to develop a rather detached attitude toward pain, bleeding or otherwise alarming symptoms.

6. In chlorpromazine-treated patients there is a high incidence of eosinophilia early in the course of treatment which may go as high as 50 per cent of the total count. Leukocytosis is common and may go as high as 15,000 or more, and there is often an elevation of the serum gamma globulin to levels of 10 to 40 per cent increase over normal. The serum bilirubin is commonly elevated to levels above the normal renal threshold for serum bilirubin without the spilling of the pigment in the urine and without clinical jaundice. It is our impression that the blood cell and serum phenomena occur as concomitants of chlorpromazine therapy and offer no clues to impending complications or their severity. The jaundice remits in all cases when the drug is withdrawn.

7. We believe all the complications of chlorpromazine are reversible if detected in time and if the drug is discontinued.

8. We wonder at the absence of dermatologic manifestations of reserpine or chlorpromazine therapy in the colored male, whereas we have seen it in colored females and both sexes among the white.

9. It is our impression that parkinsonism in all of its manifestations and gynecomastia and lactation among young females is most common among the colored race, but that these manifestations are completely reversible on discontinuing the drug and probably on reducing the dose of the drug.

10. Fever occurs rarely among patients receiving chlorpromazine, and when it does occur must be considered a warning of impending complications, some of which are of potential severe import. In our experience fever occurred before jaundice in most of the cases in which the record is complete. Each of the patients with agranulocytosis had both pharyngitis or angina and fever

for variable intervals before the agranulocytosis was actually discovered.

11. We believe there are no reliable criteria at the clinical or laboratory level for rejecting patients as poor medical risks for either drug except, as mentioned elsewhere, that gastrointestinal tract lesions or edema states make Serpasil therapy hazardous. At least one of us believes that the presence of liver disease makes chlorpromazine more hazardous.

12. In the Medical and Surgical Service we use chlorpromazine as the ataractic of choice because of its much more rapid onset of action.

13. We believe that chlorpromazine should be given in small doses and with care in patients with extensive malignant disease, particularly when nitrogen mustard, phosphoramids or X-ray therapy are being given.

14. We feel that these extremely potent chemotherapeutic agents represent a distinct advance in the approach to the treatment of the psychiatric patient, but that each drug, and particularly chlorpromazine, exerts widespread effect on many organs, tissues and functions. We believe the acute toxic side-reactions to be readily reversible in each case if detected early enough. We are sure that further experience will teach us more about optimum and maximum safe doses and the physiologic and pathologic effects of both drugs.

GENERAL SUMMARY

JAY L. HOFFMAN, M.D.

First Assistant Physician

Never in the history of psychiatry has any form of treatment been adopted so quickly by so many hospitals as has the use of chlorpromazine and reserpine. The reasons for this are readily apparent and lie in the effectiveness, relative safety, and great ease of administration of these drugs. It is a remarkable coincidence that these drugs, one an antihistaminic discovered in France, and the other a plant first used 400 years ago in India and recently isolated in potent form by Ciba in Switzerland, appeared on the market at almost the same time.

We first began using these drugs at St. Elizabeths in a small way in June, 1954 and have since then treated somewhat under 2,000 patients. Chlorpromazine has been used in a little over half this number; reserpine in the rest. The symptomatic results of treatment with both drugs seem quite similar. Some of our staff prefer chlorpromazine, because they say they can get the drug effect more quickly when it is needed in a hurry; others express a preference for reserpine, because, they claim, its side-effects are less worrisome.

Our staff received these drugs initially with some considerable skepticism and lack of enthusiasm. The idea of treating psychologic illness with chemical agents is not new and in the past has invariably resulted in disappointment and disillusionment. Most of us looked, incorrectly, upon chlorpromazine and reserpine as, at the most, "two more sedatives." However, it is evident that these drugs represent a different and new type of chemical agent. One of their temporary side-effects may be mild to moderate drowsiness, but this ordinarily lasts only for a week or 10 days. They are tranquilizing drugs that reduce motor excitement, anxiety and tension without producing marked sedation, stupor or coma. Patients under the influence of these drugs, instead of going to sleep, remain awake, relatively alert, and able to accept and participate in various therapeutic activities.

As you have been told, we have limited our daily dosage, with a few exceptions, to maxima of 10 mg. of reserpine and 1,000 mg. of chlorpromazine. (These dosages are comparatively conservative; some of our colleagues report using as much as 4,400 mg. a day of chlorpromazine and 35 mg. a day of reserpine.) Some of the failures ascribed to these drugs would seem to be attributable to the use of the drugs in homeopathic doses. We prefer to use oral medication, resorting to the intramuscular route when a quick effect is desired or when the patient is unwilling to take the drug by mouth. We have not used the intravenous route.

It appears that patients who have only recently developed psychiatric illness require smaller doses for shorter periods of time and are less apt to require a maintenance dose. Chronic patients must be given larger doses for up to a year or more.

Our experience does not permit any firm conclusions regarding the indications for keeping patients on maintenance doses. It does appear as if some patients will have to be kept on small doses for extended, perhaps indefinite, periods of time, much as the diabetic requires insulin.

Individualization of dosage seems desirable, if not essential. The rate of increase or decrease of the dose, the maximum dose, the duration of drug administration, and the size and need of maintenance doses all need to be determined by the physician for each individual patient.

Dr. Farley has mentioned the experiences of our Medical and Surgical Division with the complications of therapy. It should be noted that many minor and transient side-effects were treated on the Psychiatric Service without transfer to the Medical and Surgical Division. Management of side-effects was largely symptomatic; sometimes it was associated with temporary reduction or discontinuance of the reserpine or chlorpromazine.

The major complications or side-effects which have caused us most concern were jaundice and leukopenia with chlorpromazine and parkinsonism with both drugs. As we became more familiar with the action of these drugs we became less concerned with parkinsonism, generally continuing the drug, sometimes in a reduced dosage, while treating the parkinsonism with another drug, Cogentin. Jaundice, when it appeared, would lead us to discontinue the chlorpromazine, although occasionally we resumed it, without further ill effect, after the jaundice had subsided.

The leukopenia has been the most disturbing of the complications. As an agranulocytosis, it occurs most frequently (80 per cent) in women, during the fortieth to fifty-fourth day of treatment. Fever, a sore throat, or signs of infection call for prompt investigation of the blood picture. Sometimes administration of the chlorpromazine has been continued at a reduced dosage so long as the white blood cell count remains above 3,000.

As Dr. Waldrop has pointed out, we are not prepared to say that these drugs have curative properties or that they attack the psychopathologic process directly or specifically. A drug that could accomplish this would represent one of the most important advances in psychologic medicine. We have, however, noted remarkable symptomatic improvement in a considerable number of our patients, some 75 per cent or more showing some degree of symptomatic improvement. Patients have been made more accessible to other forms of therapy. This is one consequence of the reduction in motor tension and excitement and the clearing of the sensorium. Delusions and hallucinations become less distressing to the patients, who experience the "peace of mind" to which Dr. Riesenman referred; in some instances the delusions and hallucinations are fully abolished. Patients become better able to observe the social amenities of community living in their manner of dress, their eating habits, and their relationships to their fellows.

The need for seclusion of patients has been markedly reduced. Accidents and injuries take place less frequently. Destruction of clothing and other property does not occur as often as formerly. More patients enjoy all sorts of additional privileges, and the recreational facilities of the Hospital are taxed to the utmost. As one walks about the Hospital grounds he sees many strange faces; they are those who have previously been restricted for a long time to the locked

(*Continued on page 298*)

President's Page

SEMINAR FIRMLY ESTABLISHED

For nearly a century our Medical Society held weekly meetings from October to May. Until the advent of World War II, they were usually fairly well attended. However, attendance fell off so sharply during the War that semi-monthly meetings were decided upon. These were continued until the hostilities ceased, when the resumption of weekly meetings was contemplated. This plan was abandoned after considerable discussion, and semi-monthly meetings continued.

Succeeding Program Committees in the next few years waged a losing struggle to enlist the attendance of an audience sufficient to justify their efforts. They finally came to the conclusion that for a variety of reasons, among them being the increase in the number of medical organizations and recently inaugurated postgraduate courses sponsored by George Washington and Georgetown Medical Schools, semi-monthly meetings should be discontinued in favor of the Annual Scientific Assembly and what was to be called the Midwinter Seminar.

It was decided that the Seminar be a three-day meeting and that the roster of speakers should be made up largely of local physicians who had attained eminence in their respective fields. Response to the first Seminar, held in 1952, was not too encouraging from the standpoint of attendance. However, it was decided to give it another try. There was sufficient improvement in attendance the next year and the year thereafter to warrant still further effort.

It is easy to bandy about such adjectives as "great," "excellent," and "best," but any one of these can in all honesty be applied to the Fifth Midwinter Seminar. One thing is certain—its success firmly established the Seminar as an integral part of the Society's scientific program. The fine attendance was readily explained by the fact that the program was unusually attractive.

As only those who have had a hand in such a program know, success is attained only at the expense of time-consuming effort. The current Seminar was no exception. At the helm this year was one of the ablest program planners this Society has had in many years. Appointed by Dr. Ralph M. Caulk, the Chairman of the Program Committee (himself outstanding in this field, not only locally but nationally), was Dr. Theodore Winship, who was given sole authority over the subject matter and the speakers for the Seminar. Few scientific programs presented by our Society have attained such a high standard and uniform excellence as that presented at this year's Seminar. The credit must go to the chairman, Dr. Winship. Here, then, is my thanks to him for a task unusually well done.

W. Ross Morris

Editorials

MEDICAL ASPECTS OF "DISABILITY FREEZE" PROGRAM

In recent months many physicians have heard from patients about the "disability freeze" provision in the Social Security law. This provision, added to the Old Age and Survivor's Insurance program in 1954, permits people who have prolonged total disability to apply to have their Social Security records "frozen" for the period of their disability. Thus, the time when they could not work and so had no earnings credited to their Social Security accounts does not count against them in determining their rights to benefits, nor the amount of benefits which will be payable to them at age 65, or to their families in case they should die.

Before a worker's Social Security record can be "frozen," he has to meet certain work requirements. His Social Security record up to the time of his disability must show that he was in fact a worker, with a fairly regular and recent work history. In addition, he must be shown to have a medically determinable physical or mental impairment severe enough to keep him from engaging in any substantial gainful activity—one which has existed for more than 6 months, and is expected to last indefinitely or end in his death.

The medical evidence needed to establish the nature and severity of the applicant's disability, the date it began, and its prognosis come from the doctor who has treated the worker and knows his case, or the hospital or institution in which the worker has been confined. A Medical Report form was designed to assist the physician in furnishing the needed medical evidence and to indicate the nature and extent of clinical detail which would be necessary. It is given to the applicant for the "disability freeze" and he is asked to have it filled out by the physician most familiar with his impairment. The form itself is modeled closely after the medical report used by major life insurance companies in their disability claims work. In adapting it for use in the "freeze" program, the recommendations of a Medical Advisory Committee were closely followed. This Committee, composed of well qualified representatives of the medical and related nonmedical professions, gives advice and guidance to the Social Security Administration on the medical aspects of the "disability freeze" program.

If you have received this medical form to fill out for any of your patients, you are probably aware that the law makes the disabled worker responsible for seeing that medical evidence is submitted for him and for paying any costs involved. The law does not permit the Government to pay any costs in connection with securing the medical evidence needed for a determination of disability. You may also know that to insure the confidentiality of the medical evidence, the medical report form is not to be returned to the patient, but is to be mailed by the physician direct to the local Social Security office. This office, incidentally, is ready to furnish additional information to the physician concerning the medical report form and the operation of the "disability freeze."

Determinations as to disability based on the evidence submitted are made under an agreement with the Federal Government by professional members of an agency of the state in which the applicant resides. In most states this

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.

is the Vocational Rehabilitation agency. Since referral of disabled individuals for any rehabilitative services which might return them to gainful work is an important aspect of the program, each person applying for the Social Security "disability freeze" is told about the availability of vocational rehabilitation services.

On the professional team in the state agency at least one member is a doctor of medicine. The team reviews and evaluates all medical evidence assembled in the applicant's file, as well as such nonmedical factors as age, education, and occupational experience. Certain medical guides and standards, worked out with the advice of the Medical Advisory Committee, are used in the consideration of the medical evidence. But, although these guides and standards can be applied in most cases, they are not rigid and arbitrary. The final determination in each case is based on all the available facts on the individual's impairment and vocational history, and there is consultation among physicians in any borderline situation.

No matter how good the standards, nor how considered the judgment of the reviewing team, the determination reached can be no sounder than the evidence upon which it is based. To make sure that he is providing sufficient medical evidence for a prompt and fair determination, the doctor will want to consider the following guides in filling out medical report forms for those of his patients who have applied for the Social Security "disability freeze":

1. Include sufficient clinical detail to enable the reviewing team to make a sound determination as to the severity and extent of the patient's current condition.

2. Give enough of the clinical history to provide information as to when the disability began, and when it became so severe as to keep the patient from working.

3. Describe the probable course of the condition, so that a decision can be reached as to whether the impairment is likely to continue indefinitely, or end in death, or whether it is self-limiting, or remediable in the foreseeable future.

CHARLES L. FARRELL, M.D.
President, Conference of Presidents and Other Officers of State Medical Societies

A PRICELESS HERITAGE*

The year was 1836. That year a few books were placed on shelves in the office of Surgeon General Joseph Lovell (United States Army) for the reference use of the Surgeon General and the staff of the Medical Department. The location was in a small building which formerly stood at the northwest corner of Fifteenth Street and New York Avenue, later occupied by the offices of the Riggs National Bank, and removed over 50 years ago for the erection of the present structure of the American Security and Trust Company.

The first catalog of this new library, issued in 1840, listed 228 volumes. Today the Armed Forces Medical Library acquires every year 12,000 books and 80,000 journals in 60 languages and has nearly a million (over 961,000) items, including books, journals, theses, pamphlets, reels of photo-duplicates and portraits and other pictures. It requires about one mile of additional shelf space per year.

There are in the world about 600 medical incunabula (books printed before 1500 A.D.). About 500 of these are in the Armed Forces Medical Library.

This Library is not just a mausoleum for the

---

* EDITOR'S NOTE: This issue of the MEDICAL ANNALS carries two editorials by members of the Editorial Board who have differing views about the proposed National Medical Library. The Executive Board of the Medical Society, at its meeting, March 26, voted to support the proposed legislation (S.3430) provided the Library be established under Government medical auspices. The Board did not specify which agency of the Government should assume responsibility for the Library nor did it recommend a site.

First Home of the Surgeon General's Library

printed medical word, but it is a living, breathing, functioning organism. Every month over 1,000 reference questions are answered; 30,000 volumes per annum are circulated by interlibrary loan. Every year 100,000 articles are photo-duplicated on film to fill requests. Researchers and students visit its shelves daily from every segment of the medical population, military and civilian, official and nonofficial.

Undeniably, notorious neglect by authorities has permitted this irreplaceable possession to remain since 1888 in its present outmoded, dangerous, nonfire-resistant home at Seventh Street and Independence Avenue, Southwest, a building deserted last year by the Armed Forces Institute of Pathology when it entered its new building on the grounds of the Walter Reed Army Medical Center. Some of it is housed in inflammable "temporary" buildings in Washington and some stored in warehouses in Cleveland, Ohio.

The action of the House of Delegates of the American Medical Association in June, 1954, calling upon Congress "to give immediate priority" to the project of a new, modern building for the Library, was initiated by the Medical Society of the District of Columbia. The Task Force on Federal Medical Services of the Hoover Commission has called for the same, with the Library to be reorganized outside the Department of Defense.

Senate Bill No. S.3430, 84th Congress, 2nd Session, introduced by Senator Lister Hill (for himself and Senator John F. Kennedy) proposes the creation of "a National Library of Medicine" and seeks to implement the main purposes of the Hoover Commission Report on this subject. Senate Committee hearings were held on April 10 and 11.

In order that the Library does not get administratively lost, or ultimately attached to some other inappropriate agency, the bill should be amended to provide for the transfer of the Library to the United States Public Health Service. Possibly it might still be physically erected on the plot previously selected for it at Bethesda by the Surgeon General of the Navy.

The Congress has four times, in 1918, 1938, 1941, and 1955, authorized action directed toward new housing for the Library, but the building is not yet in sight. The present legislation must succeed, and all physicians will vigorously support it.

H.P.R.

ON MEDICAL LIBRARIES AND THEIR LOCATION*

Those of us who have ever entered that antediluvian ark at the northwest corner of Independence Avenue and Seventh Street, S.W., known as the Armed Forces Medical Library, are heartened to learn that once again the project of a new structure is under consideration by the Congress.

The Library (formerly the Surgeon General's Library) is probably the finest collection of medical books, historical and current, in the world. Probably no respectable library is so poorly housed! The building is old, far from fire-resistant, and so poorly arranged and crowded that many of the older volumes have to be housed elsewhere—in Cleveland, to be precise.

For many years plans of a sort have been considered for an up-to-date structure. During World War II it was thought that such a building might be erected in the close vicinity of those two other world-famous collections, the Library of Congress and the Folger Shakespeare Library, but this proposal seems to have been lost.

A bill recently introduced by Senators Lister Hill and John F. Kennedy would take the Library from the Department of Defense and set it up as a quasi-autonomous agency, under a Board of Regents, as the National Library of Medicine. Such an arrangement would be logical and would probably assure a more continuing support than has been (from time to time) the case.

Where should such a library be located? The suggestion has been offered that the grounds of the Clinical Center, about 10 miles from downtown Washington, would be suitable. No doubt this would be very convenient for the researchers working there, but should that be a controlling factor in the decision? The Library is a *national* organization, located in the Nation's Capital. Many students of medical problems from various parts of the country need and use library facilities rather than laboratories. Is their convenience to be disregarded? What, too, of the three medical schools of Washington, located within a short radius of the present location, but not readily accessible to Bethesda? Medical students are sometimes dependent on the caprices of public transportation and may not be able to spend the time for trips to Bethesda, even if they are fortunate enough to possess automobiles!

To place this repository in propinquity to such great medical institutions as the Clinical Center and the National Naval Medical Center is tempting, but the hope may be expressed that consideration will be given to the convenience of the many Washingtonians and visitors who may have occasion to consult and use the treasures of this greatest of medical libraries.

W. O.

---

* See footnote on page 271 of this issue.

SALK POLIO VACCINE: 1956 EMERGENCY DOSAGE SCHEDULE*

The art of medicine often consists in making reasonable compromises between ideal and real situations.

The real situation with regard to the present supply of Salk poliomyelitis vaccine, as it concerns the private practice of many physicians, may often require a compromise with the ideal dosage schedule for the administration of this proved prophylactic for paralytic poliomyelitis.

I wish to present and reiterate some facts about the Salk vaccine which may help physicians decide most wisely for themselves how they shall use the supplies of vaccine that are available to them.

---

* Abstracted from an editorial prepared by Dr. Van Riper, of the National Foundation for Infantile Paralysis, for publication in the *Journal of the American Medical Association.*

RE DISTRIBUTION OF VACCINE

Dr. Van Riper's comments substantiate the recent recommendations of the Poliomyelitis Advisory Committee for the District of Columbia. Locally the Committee advised concentration of available vaccine to the 1- to 5-year-old (preschool) children, in whom paralytic poliomyelitis is more common.

The implied increase in the supply of vaccine is encouraging, but promises to patients should be extremely guarded in view of past announcements by the Foundation.

Washington physicians have been handicapped in caring for Metropolitan patients due to Federal distribution of vaccine limited by geographic boundaries. "Airlift" relief from Virginia and Maryland is being urged and hopefully anticipated.

PRESTON A. MCLENDON, M.D.
GEORGE MAKSIM, M.D.
W. MONTAGUE COBB, M.D.
Representatives of the Medical Society of the District of Columbia on the Poliomyelitis Advisory Committee to the District of Columbia Department of Public Health

The following compromise or emergency dosage schedule of Salk vaccine coming into the physician's private practice seems warranted under current conditions of supply, discussed below:

1. Do not give "booster" shots between now and July 1. There is minimal risk if, in fact, any at all, in giving primary or booster shots during the polio season.

2. Use all available vaccine immediately. Do not save it for "second shots," even though a sterilely punctured vial of vaccine can be kept under refrigeration for an indefinite length of time without impairing either safety or potency of the vaccine.

3. The increasing supply of vaccine should be depended upon for second injections in 1956. The exact interval recommended between the first and second doses is not critical, so long as it is not less than 2 weeks. In fact, longer intervals seem to be advantageous. Therefore, the second dose may be given at any time without losing the benefit of the first.

4. However, the third dose should be given not less than 7 months after the second but may be given at any length of time thereafter.

On March 13, 1956 the Surgeon General of the U. S. Public Health Service issued a statement endorsing the postponement of "booster shots" as a temporary measure "to enable more children to receive first or second doses and thus extend protection to more people before this summer's poliomyelitis season."

In the future, vaccination against paralytic poliomyelitis, undoubtedly, will become a standard pediatric procedure, with a schedule of injections beginning at 6 to 9 months of age. But we must face the current situation realistically. The effectiveness of the vaccine depends upon the mass of antigen administered and the number and spacing of inoculations.

A compilation of reports from 30 state health officers, evaluating results of the 1955 vaccine program, showed about 79 per cent effectiveness even though 3 inoculations, as recommended, had *not* been given. This compilation compares experience among 5.2 million unvaccinated children and 4.8 million children who received 1 or more doses, but mostly 1 dose, of vaccine. Even under the epidemic conditions that prevailed in Massachusetts in 1955, a high rate of protection (60 per cent) against paralytic poliomyelitis was reported from just 1 dose of the vaccine used in that state.

Other research, still in progress, has revealed this fact—the first injection of vaccine of the potency that prevailed in 1955 did not "take" in about 20 per cent of the children inoculated. However, a substantial percentage of those who fail to acquire antibody on the first injection attain antibody, and a primary sensitization, with a subsequent injection.

For a true booster effect, in which antibody reaches very high levels, equal to or exceeding those produced by naturally acquired immunity, the injection following primary sensitization must be delayed at least 7 months or longer.

An increasing vaccine supply may be anticipated as the polio season approaches. There will also be a greater public interest in getting vaccination at that time; but because of the time required to induce full immunity, it would be advantageous to give the first dose as early as possible to all within the stated age groups.

Hart E. Van Riper, M.D.
Medical Director,
National Foundation for Infantile Paralysis

DENTISTRY IN PREVENTIVE MEDICINE

Inevitably the increase of human learning results in the desire to apply this knowledge to the benefit of all men. This is so particularly in the various fields of medical science. The discoveries of anesthesia and the aseptic technic would have had little value if they had not been applied to the ills of man.

Modern medical endeavor is directed toward prevention, and aims, in particular, to forestall the onset of disease among children. This is as it should be, since the elimination of etiologic factors in the child curtails the necessity of treating diseases in the adult which are often discouraging prognostically.

Anderson Scruggs many years ago looked beyond his day and said:

> "Who builds an empire does a lesser thing
> Than he who leads a little child to health."

The American Dental Association, recognizing the importance of child health, has brought about the observance of National Children's Dental Health Week. In the Washington area the Board of Commissioners of the District of Columbia each year, by proclamation, sets aside a week in February for this observance.

In 1928, through an Act of Congress, it was decreed that each year the President designate the first day of May as Child Health Day. Since then, during the month of May organizations interested in child health have sponsored programs and other activities to promote public awareness and interest in the preservation of child health. They further bring to parental attention the ways and means of preventing diseases and their dire concomitants and sequelae.

Each branch of medicine should support child health in its own field. The physician and the dentist have an excellent opportunity to practice preventive medicine in the treatment of their pediatric patients when, recognizing the clinical manifestations of existing or potential disease outside their own fields, they refer their young patients to colleagues in other branches of the health professions for early treatment.

It has been estimated that 90 per cent of all of the children in this country are in immediate need of dental attention. Statistical reports from research groups and various teaching institutions and clinics graphically point to the fantastic rise in the caries rate and other oral conditions of a pathologic nature. The American Dental Association, through literature directed to the public and by supporting the establishment of dental clinics in communities throughout the country, has made a major effort to stem the rise in the caries rate in children. The pediatrician, who examines such a high percentage of these patients, could add prestige and impetus to this undertaking by suggesting oral examinations and treatment in his periodic physical checkups.

In turn, those dentists who treat children must recognize the oral manifestations of systemic disease and send their patients so affected to the proper medical practitioners for treatment.

Such joint effort can produce but good results, progress in preventive medicine and a healthier people.

E. Reed Smith, D.D.S.
Director, Department of Pediatric Dentistry, Georgetown University School of Dentistry

In and Out of Focus

BY THE OBSERVER

Ethics, Traditions, Manners

Disturbed by complaints against physicians who show a disregard for proper professional conduct, a member of the Society's Grievance Committee recently exclaimed, "Aren't new members always oriented in medical ethics? If they aren't, something should be done about it. Complaints about unbecoming professional behavior could, it seems to me, be prevented if physicians were properly briefed when admitted to the Society."

As members of the Society know, luncheons are given at intervals for new members. At that time, three facets of the Society are briefly discussed: its history, its activities, and its finances. In the course of the review of its activities, the functions of the Grievance Committee are elaborated upon, and the manner in which many complaints might be avoided is pointed out. Reference is also made to the ethics or rules to which physicians subscribe when they become members.

More than this is perhaps needed. Reports of infractions of medical ethics, flouting of traditions in the community, or just plain bad manners are, to say the least, disturbing. In fairness, it should be said that the guilty comprise a small minority of physicians. The vast majority conduct themselves properly and, when uncertain as to the course they should pursue, seek advice.

Among the subjects about which they most frequently inquire are announcement cards, proper publicity, contracts for their services, and partnership agreements. They also seek clarification of rules of conduct embodied in the AMA's Principles of Medical Ethics.

Your Observer has responded to countless such inquiries. He likes to believe that this phase of his work has been helpful to the physicians who have called upon him and that, to a modest degree, it has contributed to the high standards of professional conduct which prevail in the District.

The Principles of Medical Ethics were originally adopted by the House of Delegates of the American Medical Association in 1903. There have been many revisions since that time. The current version was adopted in 1953, but tinkering with it goes on.

No one contends that the Principles are perfect, least of all those who have had a share in writing them. Considering their number and the inevitable compromises, it is surprising that there are not more flaws. As should be the case, succeeding versions have shown improvement. It will be interesting to see what the present committee, charged with their revision, comes up with at the annual meeting of the House of Delegates at Chicago next June.

The question may arise, "Why do the Principles of Medical Ethics require so much revision?" First of all, conditions of medical practice are constantly changing, with the result that the Principles require periodic modification. Then, too, as the *Bulletin of the American Association of Medical Clinics* for January, 1956, states, there exists "a certain element of confusion as to the exact functions of the common standard of professional ethics for physicians."

On this point, the *Bulletin* quotes Leake's book, "Percival's Medical Ethics:" "Medical etiquette is concerned with the conduct of physicians toward each other, and embodies the tenets of professional courtesy. Medical ethics should be concerned with the ultimate consequences of the conduct of physicians toward their individual patients and toward society as a whole, and it should include a consideration of the will and motive behind this conduct."

The *Bulletin* states: "Inconsistencies have . . . crept in." Omissions, too, are evident. These are, to a large degree, unavoidable because of the various conditions under which physicians practice. However, traditions having the force of rules spring up in every community. In some communities, for example, it is perfectly proper for a physician to insert his professional card in local newspapers. This practice is usually confined to smaller urban centers, towns, and villages. In a city such as Washington, it would be considered improper and in conflict not only with tradition but with medical ethics.

Manners may or may not involve medical ethics or tradition, but it would be well for the physician to observe them if he wishes to remain in favor with the profession of the community. An example is the physician's financial relations with his patients. If these are unnecessarily harsh, he may be beyond reproach ethically but guilty of bad manners. This also applies to the physician who without cause is guilty of spreading innuendoes about his colleagues or who is rude to a patient who leaves him for another practitioner.

As previously stated, there are few cities in the country which can boast of higher standards of professional conduct than Washington. Relations between physicians are on the whole unusually friendly. Reports of professional misbehavior are encouragingly few.

This is not to suggest that perfection has been attained. The fact is that there is sufficient evidence to the contrary to warrant more intensive efforts to inform members as to what constitutes observance of medical ethics, conformity to tradition, and the practice of good manners.

★

Anonymity—Necessary or Desirable?

Annually, members of the Society's Committee on Public Information, city editors of Washington newspapers, and reporters assigned to cover medical events sit down together for an informal discussion. The object is to bring about a better understanding between the press and the medical profession.

At a dinner held a few weeks ago, most of the discussion was devoted to the physicians' desire for anonymity where medical news stories are concerned. As might be expected, there were differences of opinion, but the area of agreement would have surprised some of the "old-timers" in the profession.

As usual, the Chairman of the Committee opened the discussion, expressing the hope that, as at past conferences, those present would find the exchange of ideas worthwhile. He inquired if the newspapermen present had anything which they would like to discuss. The response was prompt and to the point, a city editor wanting to know what could be done about physicians who in one way or another figure in a news story and who insist upon anonymity.

Many facets of this topic were discussed which for lack of space cannot be reported here. In essence, the newspapermen pretty generally agreed that physicians are unnecessarily shy or alarmed in the presence of the press. Most of them are not too much concerned about the fact that they are to be identified in a news account, but criticism of other doctors worries them. They wince at the thought of being called "an advertiser." So, the editor said, reporters find their experience with physicians often trying. Why can't the District Medical Society reassure doctors that they have nothing to fear if their names should appear in print? The profession, he said, need not be worried about the publicity-seeker. He is easily spotted and avoided. What newspapers desire is the frank and wholehearted coöperation of the medical profession in reporting news with which physicians can with propriety be identified.

Committee members readily admitted that physicians were still too sensitive about a colleague's name appearing in the newspaper, but reminded their guests that in some respects this was good. It restrains those who have a tendency to be overly fond of publicity. Then, too, the profession generally is more liberal in such matters than it once was. Seldom do medical news stories appear these days where the physician involved is identified as a "physician," "spokesman," or "a reliable medical source."

There were certain situations, the newspapermen were reminded, where it was evident that both physicians and newspapers were being misled. On occasion, intentionally or not, some reporters have taken advantage of the doctor's inexperience with the press. They fail to mention that he will be quoted unless it is agreed in advance that he is speaking off the record. Admittedly, this is a temptation difficult to resist. Nevertheless, the reporter would do well to think twice before he succumbs to it.

Newspapers, too, it was pointed out, are sometimes naïve in medical matters, although admittedly not as much so as they once were. Nevertheless, there have been instances where physicians have been publicized for performing a medical service which was not unique, as suggested in the news story, but in fact quite commonplace. Obviously, such stories have an adverse effect on the physicians' confidence in the press.

All in all, it was a profitable evening. At least, it brought out many facets of the problem which will contribute to better understanding. Then, too, as has previously been pointed out, progress has been made. This is one thing upon which all present were agreed.

Well, so much for doctors and the press. What, then, about anonymity on the air and on television? Newspapers can credit—admittedly with loss of effectiveness—a statement to an unnamed spokesman for a medical group or just an unnamed practicing physician. The same is true with respect to the radio, but as with the press there is considerable loss of interest. People want to know who is talking. If this is true on the radio, it is doubly true on television.

Your Observer's memory goes back a considerable way in radio. He recalls the furor in a Midwestern state when a physician giving health talks for a medical organization permitted the use of his name. Because of strong feelings which were aroused, he was soon off the air. It was several years before any physician in this state emerged from anonymity on the radio.

Some twenty years ago, the District Medical Society sponsored a very successful radio program. The leading character in weekly sketches and interviews was a physician, impersonated by different practicing physicians using a common pseudonym. The program was well received and continued on a local station for several years. However, the management of the radio station was never quite reconciled to the fact that the participating physicians were not identified. The program, it seemed to them, lost much appeal because of this fact.

Since that time, the medical profession here, as elsewhere, has become much more liberal in its views on the use of physicians' names on radio and television. In fact, your Observer cannot recall any physician in recent years who has appeared on the air or on television anonymously.

The British Medical Association is apparently more conservative in such matters. In an editorial appearing in the *British Medical Journal* for February 18, 1956, entitled "Doctors on the Air," the Association reportedly holds the same views today as it did back in 1934—it favors anonymity of the physician who broadcasts. In 1951, the Association said, "While recognizing that public education on selected health matters is eminently desirable . . . practitioners approached to appear in such programmes, whether for 'sound' or 'visual' broadcasting, should insist on anonymity as part of the contract."

In defending the BMA's position, the *Journal* states: "The clamour for a break in the Association's policy on anonymity seems to have been intensified with the introduction of commercial, or independent, television. It is asserted that the public—that curious abstraction whose every slightest wish some people claim familiarity with—want to know the name of the doctor on the air or on the screen so that they, the public, may know by what authority he speaks.

"The most persuasive medical voices on the air have been anonymous. The authority has been the authority of the BBC, just as the authority behind the anonymous correspondents, medical and otherwise, of *The Times* and the *Manchester Guardian* has been the authority of great and responsible newspapers."

The *Journal* admits, however, that "the profession has not considered it unethical for a doctor to write under his own name articles for the lay press on general medical subjects, especially on health and hygiene and on preventive medicine. But the difference in the size of the audience and in the nature of the medium has made the profession in this country, as in France, come down on the side of anonymity in broadcasting and television."

The American Medical Association cannot, and in fact does not, go along with this view. At least, one has not heard the AMA criticize physicians who make radio and television appearances in which they are identified. Where our own Society is concerned, it too is liberal on this point. True, some of its members have been critical of physicians who participate in lay educational programs via radio or television, and by implication suggest that they benefit monetarily from their participation. So far as your Observer is aware, this is completely untrue. The fact is the reverse—a loss in time and money, but fortunately a gain in satisfaction.

What do the Principles of Medical Ethics say on this subject?

"The medical profession considers it ethical for a physician to meet the request of a component or constituent medical society to write, act or speak for general readers or audiences. On the other hand, it may often happen that the representatives of popular news media are the first to perceive the adaptability of medical material for presentation to the public. In such a situation the physician may be asked to release to the public some information, exhibit, drawing or photograph. Refusal to release this material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation.

"An ethical physician may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers which have been published, and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. Spokesmen should be empowered to give prompt and authoritative replies and a list should be issued which identifies them and discloses the manner in which they may be reached. These provisions are made with full knowledge that the primary responsibility of the physician is the welfare of his patient but proper observation of these ethical provisions by the physician concerned should protect him from any charge of self-aggrandizement."

This is not a very satisfactory or complete definition where anonymity is concerned. So it would seem to resolve itself into the use of common sense and the observance of good manners. It perhaps can be said that, generally speaking, the American medical profession has no objection to the physician being identified on radio or television (or, for that matter, in the press), providing he does so with proper modesty and good judgment.

★

Announcements One of the most frequent inquiries received from physicians at the Society's Executive Offices is about the preparation and circularization of cards announcing the opening of an office. The inquirer wants to know first of all how to compose the copy for the card he intends to send out. The answer to that is simple—name, specialty if any, address, and telephone number. He then wishes to know to whom announcements should be sent, whether it is proper to send them to individuals other than physicians. This requires some explanation, because particular circumstances must be taken into account.

To begin with, it is improper, and certainly unwise, to send announcements to individuals other than physicians, even though they be friends. When the doctor fails to observe this rule, complaints are frequently received from other physicians. He is surprised and even chagrined to learn that his friends wasted no time in telling his fellow practitioners about the recently received announcement. The result may be the beginning of a grudge between physicians, or, at the least, avoidable criticism. So the physician should keep in mind that, except under unusual circumstances, he should limit the mailing of announcements to physicians. Of course, if he is a general practitioner he will ordinarily not send out announcements, because they would be of little value to him, although here again there may be exceptions.

There is another situation which should be mentioned in connection with announcements. Let us say that a young physician who has entered a partnership with an older physician, or who is employed by him, decides that he does not like the arrangement and wishes to leave. When the time comes for separation, the question arises in his mind as to whether it is proper for him to send announcements to patients whom he has seen while engaged as a partner or employee but who have never been seen by the older practitioner. Of course, the answer to this question is "No." It is improper because he saw those patients only because of his association with the older practitioner. If the patient really desires the services of the younger physician, he will have no difficulty in finding him.

It is, of course, improper to send announcements to business establishments or to newspapers. This is obviously done for only one purpose, attracting clientele, and is therefore unethical.

Finally, there is a question as to the propriety of a substitute for the card. Not long ago, a young physician showed your Observer a letter which had been sent to physicians in his area announcing the opening of an office in which he was associated with another physician. In his communication he referred to his specialty and frankly solicited referred work. The doctor was informed that this approach would antagonize other physicians, if for no other reason than that it violated customs in the community. It has long been a tradition in the District of Columbia to send cards announcing the opening of an office. Sending of a letter is unusual, and the wording in this instance was especially objectionable to a number of physicians who called your Observer.

Aside from the card, there are other ways of announcing the opening of an office. Signs are naturally the most common. They can be flamboyant or in good taste. The Society has adopted no regulations as to their size or what should appear on them. That really should not be necessary. Common sense should dictate that the lettering be only large enough to be readily seen from a reasonable distance and, except where justified, only bear the physician's name.

Returning to announcements, it is often difficult for a physician opening an office in the District of Columbia to obtain the assistance required to address envelopes to the several hundred physicians in private practice. Here is where the Society can be of assistance. Envelopes will be addressed to the more than 2,000 members for physicians who wish to send out announcements at a nominal cost. All that is required is to call the Society's Executive Offices and make arrangements for the addressing to be done at a time which is mutually satisfactory.

★

"...The Crowning Shame..." Unbelievable as it may seem, there is a public building in Washington that has "outside toilets." Situated in a separate building, they are connected with the venerable red brick structure by an open-air ramp. What is more incredible is that this building houses what the Hoover Commission has described as "the largest and most important medical library in the world," the Armed Forces Medical Library. Small wonder, then, that one Washington newspaper describes this state of affairs as "the crowning shame."

Far more to be deplored than sanitary inadequacies are the fire hazards. For example, electric wiring and pipes are in evidence on the walls throughout the building, particularly in the basement. There are only two means by which to go from one floor to another, a tiny elevator and a central staircase. One can imagine how few of the precious volumes would be saved in the event of a fire. In fact, the employees would have to make a hasty exit to save their own lives.

However, fire is not the only hazard threatening the Library. The space available for the enormous collection of books and other publications is entirely inadequate, there being 68,871 usable square feet when nearly 300,000 square feet is required. Shelves which should be no more than 75 per cent occupied average 90 per cent occupancy. It has therefore been necessary to store hundreds of volumes in the basement close to heat and water pipes. Because there are no humidity controls, books tend to disintegrate in "the notorious Washington humidity."

Your Observer recalls visiting the Library two or three years ago. At that time it had far outgrown the main building, and a substantial portion of its collection of books was stored in nearby temporary structures. Virtual fire-traps, they were so poorly constructed that the floor shook as one walked between the bookcases. Fortunately, the books have since been returned to the main building, where they are at least somewhat more secure against fire.

Most of these disturbing facts have been known and widely publicized for more than three decades. In fairness, it should be said that Congress, prodded by succeeding administrations, the American Medical Association, and other medical groups, has not been unaware of the situation. As long ago as 1920, funds were voted for planning adequate quarters. Only last year, Congress authorized the expenditure of $350,000 for plans and specifications for a new building. Since the Library was under the direction of the Department of Defense, the funds which should have been allocated to it were used for other purposes deemed more important militarily. As one writer described it, the Library has been in the unfortunate position of being a "budgetary stepchild."

The Library's most recent champions are Senators Lister Hill, of Alabama, and John F. Kennedy, of Massachusetts, who have introduced legislation in the current Congress providing for the establishment of what would be known as the National Library of Medicine. Authorized in the bill is the construction of a building, estimated to cost between 6 and 7 million dollars. The Armed Forces Medical Library would be the nucleus of the new library. Acceptance of private contributions for supplemental support would be permitted.

The Medical Society has taken its position along with that of the American Medical Association and other state medical societies in support of the proposed legislation. At its meeting on March 26, 1956, the Society's Executive Board voted unanimously in favor of the Library bill, with the qualification that it be placed under the direction of a medical department in the Government.

Certainly the time has long since passed when our Government can afford to ignore the plight of one of its most valuable institutions. The loss of the irreplaceable mine of medical knowledge because of indifference would be tragic, indeed.

* * *

"...Rough Justice..."

Capital punishment has long been the subject of heated debate. The preponderant opinion in the United States would seem to be on the side of those who favor it. Forty of the 48 states impose the maximum penalty for murder and certain other major crimes by hanging, electrocution, and lethal gas. The exceptions are Maine, Michigan, Minnesota, North Dakota, Rhode Island, and Wisconsin, which have no death penalty for any crime. Among our Possessions, Puerto Rico is the only one in this category.

Opponents of capital punishment point to the record which they insist shows that the death penalty is no deterrent to crime. Statistics, they say, reveal that the total number of major crimes in this country in 1946, including murder, manslaughter, rape, robbery, aggravated assault, etc., was 1,685,203. This had increased in 1954 to 2,267,250. Those who disagree counter with the argument that the population of the United States between 1940 and 1955 increased by more than 33,000,000; and, as a result, social and economic problems contributing to major crimes have multiplied. Undoubtedly, arguments pro and con will go on for a long time. Whether or not they will evenually be resolved is still a moot question.

However, across the Atlantic things are happening which may have repercussions in this country. Recently, Britain's House of Commons, by a "free vote," favored abolition or suspension of capital punishment. The House's action, however, did not finally dispose of the matter. It was nevertheless the first step in eliminating the maximum penalty.

The Lancet (London) for February 25, 1956, editorialized on this subject as follows: "The issue between the defenders of this penalty and its opponents has now been narrowed to a single question—whether its application has a unique deterrent effect. . . The Royal Commission on Capital Punishment found 'no clear evidence in any of the figures we have examined that the abolition of capital punishment has led to an increase in the homicide rate or that its reintroduction has led to a fall.'

"There being no good evidence that hanging murderers checks the number of murders, the case for discontinuing this rough justice seems to us unanswerable. Firstly, by ending the life of a murderer we impose gross suffering on his relations, before and after the execution. Secondly, in a trial for murder, juries, aware of the grim decision before them—and perhaps of the conceivable risk of exterminating an innocent victim—are reluctant to bring in a verdict of guilty. . . .Finally, our society damages itself by giving its warrant to the killing of any of its members; and this damage is made the worse by newspaper accounts of the final days and hours of the murderer's life, which, like the public executions of bygone days, satisfy and promote a morbid appetite."

Whether the action of the House of Commons will become law in England is up to the House of Lords. *The Lancet* urges that this body "bear in mind the country's growing uneasiness about this grotesque legacy from our forefathers."

Your Observer believes that his reaction to capital punishment is typical of many. Upon reading about a brutal, inexcusable murder, his first response is to become vengeful. He would destroy the perpetrator at once, summarily so.

Time passes, and many other things intervene to occupy his attention. He no longer feels as strongly as he did. However, should a court decide that the criminal must forfeit his life, he rebels inwardly at the thought. Forgotten for the moment are the heartlessness and brutality of the act of which the criminal was guilty.

There is, of course, no consistency in such responses. Obviously, there is need for more objectivity. Humanity dictates that every effort should be made to salvage even the most hardened criminal. However, objectivity can go too far, and many think it already has.

Whatever one's views are in the matter, capital punishment for the most violent crimes will undoubtedly remain on the statute books of most of our states for some time to come. At least, that is the way it appears to your Observer.

T.W.

"In and Out of Focus" will not appear in the June, July and August issues of MEDICAL ANNALS. It will be resumed with the September number.

COURSE IN DISASTER MEDICINE

Arrangements are being completed by the Committee on Emergency Medical Care of the Medical Society of the District of Columbia for a curriculum designed to offer practical training in medical care problems arising under disaster conditions. The course will acquaint physicians with treatment principles and technics applicable to the emergency care of such mass casualties as would occur during a civil catastrophe (flood, hurricane, riot) or following enemy attack.

The first course will be given, May 21–25, 1956, in the auditorium of the Medical Society building, 1718 M Street, N.W. There will be 10 hours of instruction, divided into five 2-hour sessions, each one commencing at 8 p.m. The course will be repeated several times during the next 12 months to accommodate as many members of the Society as possible.

The faculty will consist of senior medical officers of the military services from the Army Research and Graduate School and the Naval Medical Center; there will also be a number of recognized civilian specialists. The subjects to be covered will include:

Session I, May 21: Orientation; Bomb Phenomenology and Weapons Effects; Radiation, Fall Out, Pathology of Ionizing Radiation, Treatment of Radiation Casualties; Calculation and Type of Casualties.

Session II, May 22: First Aid, Sorting, and Medical Evacuation; Débridement; Fractures; Burns; Sedation, Analgesia and Anesthesia; Infection and Antibiotics.

Session III, May 23: Cost of Delayed Treatment; Psychiatry in Mass Casualties; Preventive Medicine and Public Health under Disaster Conditions; Experience of Civilian Physicians in Disaster; "A Civilian Medical Team in Action" (film and commentary).

Session IV, May 24: National Plans for Emergency Medical Care; D.C. Plans for Emergency Medical Care; Use of Paramedical Personnel under Disaster Conditions; Civil Defense Activities Plans in Relation to Local Disasters.

Session V, May 25: Organization of Medical Facilities in Disaster; Tour of FCDA Improvised Hospital.

These courses are still in the planning stage. The Committee hopes to have complete programs in the hands of Washington doctors before this issue of the Annals is off the press.

WINNERS IN HOUSE OFFICERS' ESSAY CONTEST

Winners in the Medical Essay Contest for House Officers for 1955–56 have just been selected. Dr. Robert H. Gruver, Chief Medical Resident of Veterans Administration (Mt. Alto) Hospital, has received the First Award of $100. The paper which he submitted was entitled "The Clinical Application of a Simple Bedside Technic for Measuring Blood Volume." The winning entry will be published in the June issue of the Medical Annals.

Dr. Gruver is a native Washingtonian. He received his medical degree from the University of Virginia in Charlottesville in 1952. He interned the following year at D. C. General Hospital, and a second year, as resident at the Hospital, was spent in the study of pulmonary diseases under Dr. Sol Katz. During 1954–55 Dr. Gruver was a resident in medicine at Veterans Administration Hospital. By July of this year, he will have completed a year as Chief Medical Resident, following which he plans to go into the private practice of internal medicine in Arlington, Virginia.

Dr. Gruver

A paper prepared jointly by Dr. Robert J. Gilston and Mr. John J. McPhaul, Jr., received the Second Award of $50. Under the title, "Physiologic Murmurs in Pregnancy: A Reëmphasis," it was published in the September, 1955 issue of the Medical Annals but was submitted for publication with the understanding that it be considered an entry for the Essay Contest.

At the time the manuscript was in preparation Dr. Gilston was Chief Resident in Medicine of the Georgetown Division of the D. C. General Hospital. He is now engaged in the private practice of internal medicine at Amsterdam, New York.

Mr. McPhaul, co-author, is a senior medical student at Georgetown University School of Medicine. When collaborating in writing the paper last summer, he was serving a fellowship, sponsored by the National Foundation for Infantile Paralysis, in public health and preventive medicine at D. C. General Hospital under the guidance of Dr. Hugh H. Hussey.

The other papers submitted in the contest were also good, and several others may be published during the year. The committee which selected the winning entries was made up of members of the Editorial Board—Dr. Wallace M. Yater, Editor, Dr. Thomas M. Peery, and Dr. Hugh H. Hussey.

GP'S HOLD RECORD CONVENTION IN WASHINGTON

The American Academy of General Practice closed its most successful Scientific Assembly at the National Guard Armory in Washington, March 22, with a record registration of 7,128. Of this number, 3,506 were physicians. Inclement weather the weekend preceding the Assembly may have kept some people from attending.

Dr. Lowell T. Coggeshall, Special Assistant, Health and Medical Affairs, of the Department of Health, Education and Welfare, greeted the Nation's family doctors when the Scientific Assembly got under way at 1 p.m. on Monday. Dr. Samuel Diener, President of the District of Columbia Chapter of the Academy, made a few remarks following the opening address. In the afternoon, Dr. George N. Raines, of Georgetown University, led a panel discussion on "Disturbances and Disorders of Demeanor." The first day's meeting closed with an address by Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, on "The Changing Pattern of Disease."

Vice President Richard M. Nixon made a surprise appearance at the opening of Tuesday morning's scientific session, bringing with him a personal greeting from President Eisenhower, which was in addition to a letter previously sent by the President to Mr. Mac F. Cahal, Executive Secretary and General Counsel of the Academy, and read on the opening day.

Wednesday, March 21, was designated District of Columbia Medical Society Day, and a gratifying number of Washington physicians swelled the attendance on D. C. Day.

Dr. Cecile L. Fusfeld, of Washington, and Dr. Edward Settel, of Brooklyn, New York, were presented with the Ross Awards of $1,000 each during the convention. Dr. Fusfeld, Washington general practitioner, Past President of the Women's Medical Society of D. C., was awarded the prize for a paper entitled, "Vaginal Cytodiagnosis in a General Practitioner's Office," which was published in the October, 1955 issue of GP. This paper was originally delivered at the November, 1954 meeting of the Southern Medical Association, in St. Louis, before the Section on Cytology. These awards, presented each year by the Ross Laboratories of Columbus, Ohio, are given to members of the Academy who write the best papers published in GP during the year. Over a five-year period, Dr. Fusfeld was the first woman to receive a Ross Award.

Dr. Fusfeld

Dr. and Mrs. I. Phillips Frohman were in charge of local arrangements. Dr. Frohman, who served as Editor of the 1955 edition of Abstracts of the Seventh Annual Scientific Assembly, will serve again as Editor of the 1956 edition. Dr. Frohman and Dr. Beveridge Miller were delegates to the Academy meeting from the District of Columbia. Alternates were Drs. Maurice J. Kossow and Sherman A. Thomas.

Dr. W. Proctor Harvey, Director of the Heart Station at Georgetown University School of Medicine, moderated a live clinic on "Diagnosis and Treatment of Curable Heart Disease." His "cardiology team" consisted of Drs. Charles A. Hufnagel, Jack P. Segal, Lewis Diben, John Griffen, Michel Carrado, Recep Ari, and Donald Schilder.

Dr. Robert H. Barter, Associate Professor of Obstetrics and Gynecology, George Washington University School of Medicine, was the first speaker in an OB Symposium, March 21. He discussed "Preparation for the Pregnancy."

Dr. Josephine J. Buchanan, of D. C. General Hospital and Georgetown University, presented a lecture demonstration on "Management of Patients with Disabling Disease." This was another live clinic with patients present from the District of Columbia General Hospital.

The District Medical Society was well represented in the Scientific Exhibit. The following exhibits were sponsored or co-sponsored by members of the Society:

"Chronic Headache," Drs. Lester S. Blumenthal and Marvin Fuchs.

"Medical Applications of Radioisotopes," Dr. Adolph Friedman.

"The Limitations of the Therapy of Acne," Dr. James Q. Gant, Jr., George Washington University School of Medicine.

"Immediate Repair of Traumatic Injuries and Reconstruction of Congenital Anomalies," Dr. Alfred J. Suraci.

"Fundamentals of Wound Healing," Dr. Philip A. Caufield, Georgetown University School of Medicine.

"Treatment of Cervical Erosion," Dr. I. Phillips Frohman.

"Myocarditis—A Frequent Complication in Systemic Disease," Capt. W. M. Silliphant, M.C., U.S.N.; and Dr. William C. Manion, Armed Forces Institute of Pathology.

"Anti-coagulant Therapy Controlled by a Simple Prothrombin Test," Dr. Benjamin Manchester, George Washington University School of Medicine.

"Glutamic Oxaloacetic Transaminase (GOT): A New Test for Myocardial Infarction," Dr. Bernard H. Ostrow.

"Hyptonic Dysfunctions of the Urinary Bladder," Drs. Edwin Davis, Leroy W. Lee, University of Nebraska, Omaha, and Edwin Davis, Jr., Washington.

"Results of Temporal Lobectomy for Psychomotor Seizures," Dr. Arthur A. Morris.

"Psychopharmacologic Agents for the Management of Acutely Disturbed Patients," Dr. Joseph F. Fazekas, D. C. General Hospital.

Dr. Carolyn Pincock took charge of a children's tour of Washington, a new convention feature which proved to be very popular.

Dr. John S. DeTar, of Milan, Michigan, was installed as the new President of the Academy, succeeding Dr. John R. Fowler, of Barre, Mass. The new President-elect is Dr. Malcom E. Phelps, of El Reno, Oklahoma. Dr. Merrill Cross, an Associate member of the District Medical Society, was a member of the Nominating Committee.

St. Louis will be host city for the Academy's Ninth Annual Assembly, which will be held there, March 25-28, 1957.

WOMAN'S AUXILIARY NOTES

The beautiful, newly redecorated Columbia Country Club was a perfect setting for our Annual Spring Dinner Dance on April 7, when 246 Auxiliary members, their husbands and invited guests gathered for cocktails, dinner and dancing. The ladies looked their glamorous best and everyone had a heap of fun at this gay party. Orchids to Mrs. Leonard T. Peterson and her Social Committee for the great success of this affair!

At our April meeting, Dr. Calvin T. Klopp, President of the District of Columbia Division of the American Cancer Society, spoke on "The Beginning of One End" and showed the film, "Self-examination of the Breasts." A lively question-and-answer period followed, in which Dr. Klopp dispelled some misinformation and enlightened all of us on the intelligent approach toward defeating this disease.

Our President, Mrs. Rapee, represented the Auxiliary as one of the guests of honor at the Fashion Show Luncheon on March 21, which was one of the features of the Ladies Entertainment program during the national meeting of The American Academy of General Practice. Mrs. I. Phillips Frohman, Chairman, introduced Mrs. Ezra Taft Benson, Mrs. Leonard A. Scheele, and Mrs. Rapee to the audience, which filled the Mayflower Ballroom to capacity. Miss A. Louise Eckburg, Assistant Editor of MEDICAL ANNALS, and several groups of Auxiliary members were also present at this affair.

The agenda and social program for the 33rd Annual Convention of the Woman's Auxiliary to the American Medical Association in Chicago, June 11 to 15, have been announced. Auxiliary members and their guests are invited to attend all the general meetings, which will be held in the Conrad Hilton Hotel. The social functions include a reception on Sunday, a tea on Monday, and luncheons on both Tuesday and Wednesday. On Thursday evening the Annual Dinner for members, husbands and guests will be held. The guest speaker will be the well known actress, author, lecturer, fashion authority and wit, Miss Ilka Chase. On Wednesday morning our own Mrs. Edgar E. Quayle, who is one of the Vice Presidents of the national group, will preside as moderator of the State Reports-Eastern Division. Plan to attend the Chicago meeting so that we can have a good representation from the District of Columbia.

This year has gone by so quickly it is difficult to realize that our closing meeting will be on May 9, when all chairmen will file their complete, annual reports at the regular business session to be held in the Library. Following a brief meeting Auxiliary members and their guests will gather for the Annual Spring Luncheon at 12 noon at the Columbia Country Club.

MRS. I. PHILLIPS FROHMAN
Publicity Chairman

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
February 9	Dr. Frank S. Ashburn	Nursing Care of Postoperative Chest Surgical Cases	Nurses' Alumnae, Emergency Hospital
March 13	Dr. Maxwell Boverman	Emotional Problems on Entering Junior High School	Parent Group, Ann Beers School
March 18	Dr. W. Ross Morris	The Care of the Indigent and Semi-indigent in D. C.	District Junior Chamber of Commerce
	Dr. Allan Coleman	Problem of Accidental Poisoning in Childhood	
March 20	Dr. Jack E. White, *Moderator* Dr. Randolph K. Brown	Panel Discussion on Cancer of the Colon	Nurses in Metropolitan Area
March 20	Dr. W. W. Cardozo	Discussion of film, Fears of Children	W. B. Powell Elementary School, Parent - Teachers Association
March 21	Dr. Z. M. Lebensohn	Psychiatric Aspects of Aging	D. C. Mental Health Association
March 26	Dr. Murray M. Copeland	Discussion of film, Breast Self-examination	Ladies Board, Georgetown University Hospital
March 27	Dr. Jack E. White	Discussion of film, Man Alive	United Cafeteria and Restaurant Workers
March 29	Dr. Lois I. Platt	Discussion of film, Breast Self-examination	Embassy Tea
April 9	Dr. Alvin Seltzer	Common Misconceptions about Allergies	Ladies Auxiliary, Washington Hebrew Academy
April 11	Dr. Calvin T. Klopp	Discussion of film, Breast Self-examination	Woman's Auxiliary to the Medical Society of D. C.
April 14	Dr. George Maksim	Competitive Sports and Children	D. C. Chapter, American Association for Health, Physical Education and Recreation
April 16	Dr. Charlotte P. Donlan	Discussion of film, Traitor Within	D. C. Business and Professional Women's Club
April 17	Dr. C. Willard Camalier, Jr.	Discussion of film, Man Alive	Commercial Workers of America, Local 2336
April 18	Dr. D. Franklin Hodge	Discussion of film, Man Alive	Church of the Latter Day Saints
May 3	Dr. J. H. King, Jr.	New Hope for the Blind	Georgetown Lioncel Club

On the Lighter Side

The W.A.M.S. Bowling League wound up its season's activities in March after an exceptionally successful bowling season at the Bethesda spillways. In case you are scratching the bald spot and wondering what-in-the-name-of-heaven is W.A.M.S., let me tell you! Those letters mean Woman's Auxiliary to the Medical Society Bowling League, and believe me, brother, those ladies are not to be sneered at, bowling-wise. They are good! And they are deadly serious about their League and their bowling.

I can well imagine the icy chill that would pervade the atmosphere if a mere husband bowler would have the audacity to disparage the little woman's bowling ability even in a joke. I am told by those husbands who know that it isn't healthy to complain about the dinner on the table on that Bowling Day when the lady of the house has had one of her infrequent off-days in the bowling scores. The man of the house can always tell, the minute he opens the front door, when his lady bowler has whopped up a big score—or—when she has gotten those difficult spares. He can tell when she has scattered the pins like chaff before a wintry wind in making those strikes. He can tell when he arrives home for dinner on Bowling Day, because his lady is all smiles and sweetness, and even hums a little tune while opening up those cans.

The standings of the prize-winning teams following the 1955–56 season are as follows:

First place team: Mrs. Edward Ferguson, *Captain;* Mrs. D. Franklin Hodge, Mrs. Charles Hill, Mrs. James Frawley, and Mrs. Herbert Schoenfeld.

Second place team: Mrs. Raymond Kirchner, *Captain;* Mrs. Luther Hall, Mrs. Eugene Lipow, Mrs. Frank Kreglow, and Mrs. George McLain.

Third place team: Mrs. John Kneipp, *Captain;* Mrs. Jack Kleh, Mrs. John Curry, Mrs. William Gibb, and Mrs. Henry Feffer.

Fourth place team: Mrs. Philip Steptoe, *Captain;* Mrs. James Scully, Mrs. James Murphy, Mrs. Hugh House, and Mrs. Alexander Leonardo.

Fifth place team: Mrs. Roger Williams, *Captain;* Mrs. Ross Veal, Mrs. Edwin Parker III, Mrs. James Dusbabek, and Mrs. Robert Taylor.

The individual prizes were awarded to the following lady bowlers:

High individual average: Mrs. James Frawley—96
High individual game:
  Mrs. Howard Donald—137
  Mrs. Noel Stow—137
High individual set: Mrs. Raymond Feldman—348
High strikes: Mrs. Herbert Gates—20
High spares: Mrs. Alger Doland—74
High flat game:
  Mrs. Hamilton Dorman—93
  Mrs. Edgar Quayle—93
Greatest improvement in an "old" bowler:
  Mrs. Eugene Lipow—70 to 77 average
  Mrs. Hewitt Varney—63 to 70 average
Greatest improvement in a "new" bowler:
  Mrs. Ralph Whitley—74 to 80 average
The Amanda Kreglow Old Timers' Trophy:
  Mrs. Francis O'Bryan
  Mrs. Leonard Peterson

The Annual Sweepstakes were rolled and the winning prizes were awarded to the following bowlers in the order named:

1.	Mrs. Howard Donald	320	plus handicap of	18–338
2.	Mrs. Herbert Gates	320	" " "	15–335
3.	Mrs. Samuel Allen	276	" " "	54–330
4.	Mrs. Ross Veal	270	" " "	57–327
5.	Mrs. Edward Krause	262	" " "	60–322
6.	Mrs. Hewitt Varney	247	" " "	75–322
7.	Mrs. Robert Maher	300	" " "	21–321
8.	Mrs. Leo Varden	288	" " "	33–321
9.	Mrs. James Frawley	318	(no handicap)	318
10.	Mrs. James Choate	222	plus handicap of	96–318
11.	Mrs. Julius Radice	300	" " "	18–318
12.	Mrs. Eugene Lipow	263	" " "	54–317
13.	Mrs. Philip Steptoe	290	" " "	37–317
14.	Mrs. Thomas Crisp	238	" " "	78–316

The high scratch game of 117 was rolled by Mrs. Edgar Quayle, and the high scratch set of 305 was rolled by Mrs. Alger Doland.

The officers of the W.A.M.S. Bowling League for the new season of 1956–57 will be as follows: Mrs. Edgar Quayle, *Chairman*; Mrs. Robert Taylor, *Vice Chairman*; Mrs. Richard Spire, *Secretary*; and Mrs. Roger Williams, *Treasurer*.

Good luck and good bowling for next season—and if the W.A.M.S.' first five winning teams would like to challenge the first five winning teams of the D. C. Medical Bowling League next year, it could be arranged, with an exciting and very pleasant evening for all contestants. Think it over, W.A.M.S.!

J. Earl Kadan, M.D.

News and Personals

MEETINGS—Past and Future

The American Medical Association will convene for its **105th Annual Meeting** in Chicago, June 11–15. Activities will center at Navy Pier, Northwestern University, and near north-side hotels. Headquarters for the House of Delegates will be in the Palmer House.

Representing the District Medical Society at the convention will be the Society's delegates, Drs. Hugh H. Hussey and Raymond T. Holden, and Theodore Wiprud, Secretary of the Society.

The Annual Seminar of the District of Columbia and Maryland Chapters of the American Academy of General Practice will be held on Thursday, May 17, at the Sheraton-Belvedere Hotel in Baltimore. This will be an all-day meeting. All interested physicians are invited to attend. There will be no registration fee.

The Medical Society of St. Elizabeths Hospital held its **Nineteenth Annual Meeting,** April 13 and 14, in the Geriatric Building Auditorium of the Hospital.

There were two full days of scientific meetings. Most of the participants were members of the District of Columbia Medical Society. Some of the papers of interest presented were:

"Remarks on the Significance of the New Drugs," Dr. Winfred Overholser

"Recent Progress in Temporal Lobe Epilepsy," Drs. John T. Lord, Harvey Ammerman, and Harold Stevens

"Family Dynamics in the Etiology of Childhood and Adult Emotional Disturbances," Dr. William W. Krause

"Analysis of a Repetitive Dream with Painful Content," Dr. Daniel S. Jaffe

"Psychotherapy of a Schizophrenic Teen-ager; a Case Report," Dr. Maxwell Boverman

"The Role of Sex in Human Behavior," Dr. Leon Salzman.

There were two panel discussions. Dr. Addison M. Duval was moderator of the first, on "Reëvaluation of the Concerns and Aims of the Medical Society of Saint Elizabeths Hospital." Panelists were Drs. Otis R. Farley and William L. Granatir. In a Panel Discussion on Community Services, Drs. Thomas Griffin, Christine W. Kehne, George W. Sprehn, and William L. Granatir participated. Among those who discussed papers were Drs. Zigmond M. Lebensohn, George D. Weickhardt, George N. Raines, Harold Stevens, Edwin S. Kessler, Sidney Berman, and Edith Weigert. Dr. Edgar Griffin and Dr. Joseph Abrahams participated as presiding officers.

Dr. Winfred Overholser, Superintendent of the Hospital, entertained members and guests in his apartment at a buffet supper, April 13. The meeting closed on Saturday night with a dinner-dance at the Shoreham Hotel.

In connection with this meeting, the new **Dorothea Lynde Dix Pavilion** was dedicated on Friday afternoon, April 13, with Vice President of the United States, Richard M. Nixon, giving the dedicatory address. Superintendent Overholser explained the concept of the new structure. Members of the Cabinet, Senators and Congressmen, and other public officials were present for the opening ceremonies.

The new, 10-story building was named for Miss Dix as a memorial to her tremendous contribution to professional and public understanding of the need for humane care and enlightened treatment of the mentally ill. The Pavilion will operate as a receiving and intensive treatment center with therapeutic and rehabilitative facilities and personnel. Built at a cost of $6,000,000, it contains many new facilities and innovations for the care of the mentally ill. There are 420 beds, in 1-, 2- and 4-patient rooms.

Another building was recently opened on the grounds at St. Elizabeths. This is the **St. Elizabeths Chapel**, the first structure to be built solely for religious purposes on the Hospital grounds. It was dedicated, March 5, in a service attended principally by psychiatrists and clergymen. Colonial in style, the three-faith Chapel was built at a cost of $300,000. It symbolizes the new partnership between religion and psychiatry, a development which has been fostered in Washington by the Washington School of Psychiatry.

Several members of the District Medical Society attended and took part in the **Annual Meeting of the Aero Medical Association** held at the Drake Hotel, in Chicago, April 16–18.

Following the opening ceremonies, April 16, Dr. Frank B. Berry, Assistant Secretary of Defense, Health and Medicine, gave the Louis H. Bauer Lecture.

Dr. Ludwig G. Lederer, of the Capital Airlines, Washington, spoke at the general session the same day on "The Aeromedical Aspects of Turbo Prop Commercial Aircraft in the United States." On April 17 he took part in a Panel Discussion on Current Air Line Medical Problems, focusing on the cardiovascular problems.

Dr. William R. Stovall, Past President of the Aero Medical Association, was Chairman at the Civil Aeronautics Administration Session, April 16, and presided at a CAA Medical Forum the same afternoon.

Major General Harry G. Armstrong, USAF, as Chairman, presided at the meeting of the Section on Aviation Physiology, April 17. Dr. Bernard L. Jarman, founder-member and Past President of the Association, chairmanned the Section on Personal Equipment, April 18.

Pfizer Laboratories, with the coöperation of the D. C. Medical Society, presented **Lt. Thomas A. Dooley, MC. USNR,** as guest speaker at a dinner which the Laboratories sponsored at the Hotel Statler, March 22. Invited to the dinner were the physicians of the Washington Metropolitan Area; it was estimated that more than 600 attended.

Dr. Dooley, who told an amazing story of his "Passage to Freedom" against the Vietnamese Communists, is a career naval officer and currently holds a residency in orthopedic surgery at the U. S. Naval Hospital in Bethesda.

Mr. Robert A. Bittner, Regional Manager of Pfizer Laboratories, acted as host for the Laboratories. Presiding at the dinner was Dr. W. Ross Morris, President of the District Medical Society. Major General Howard M. Snyder, Physician to the President, and Vice Admiral Joel T. Boone, Medical Director of Veterans Administration, both Honorary members of the D. C. Medical Society, were among the distinguished guests present. Also among the guests of honor were the following members of the Society: Drs. Ralph M. Caulk, Milton M. Greenberg, Wallace M. Yater, Daniel L. Seckinger, George W. Calver, Thomas H. Alphin, Verne K. Harvey, Richard E. Palmer, Robert A. Bier, and Mr. Theodore Wiprud.

The Metropolitan Washington Tuberculosis Conference held its 1956 Spring Meeting, April 4, at the Health, Education and Welfare Building on Independence Avenue, S.W.; the theme was "Closing in on Tuberculosis." Dr. Sol Katz, President, and Chief of the Pulmonary Disease Division, D. C. General Hospital, was the presiding officer.

Dr. Donald R. Sickler, Chief of the Tuberculosis Control Division of the D. C. Health Department, presented a paper at the General Session on "The Non-conforming Patient in the District of Columbia."

Dr. David Leibovici, Chief of the Rehabilitation Section of Glenn Dale Hospital, was moderator for a panel discussion on "What Is the Community's Responsibility for Discharged Patients?"

Dr. R. G. Beachley, Health Officer of the Arlington County Health Department, moderated a panel discussion on "What About the Non-conforming Patient in the Community?" One of his panel participants was Dr. Raymond L. Schwartz, who discussed "Private Medical Aspects."

The Metropolitan Washington Tuberculosis Conference is sponsored annually by the District of Columbia, Maryland State, and Virginia State Tuberculosis Associations.

The Washington Psychiatric Society met, March 23, in the auditorium of the District Medical Society. Dr. R. Finley Gayle, Jr., President of the American Psychiatric Association, was present to speak on "The Role of the American Psychiatric Association."

The Washington and Baltimore Psychiatric Societies held a joint meeting, April 13, at the Clinical Center of the National Institutes of Health in Bethesda. There were two speakers on the program, Dr. Robert A. Cohen, Associate Director in Charge of Clinical Research, and Dr. Charles Savage, Research Psychiatrist, both of NIH. Dr. Cohen described "The Organization of Clinical Research at the National Institute of Mental Health" and Dr. Savage read a paper on "The Psychological and Biological Aspects of LSD Psychoses."

The Washington Psychiatric Society has elected the following officers for 1956–57:

Dr. Winfred Overholser, *President;* Dr. Seymour J. Rosenberg, *President-elect;* Dr. Marvin L. Adland, *Secretary;* and Dr. Norman Taub, *Treasurer.*

The Rheumatism Society of the District of Columbia held its regular meeting, April 4, at the Armed Forces Institute of Pathology. The meeting was devoted to a consideration of the "Pathology of Osteoarthritis and Osteophytosis." Two speakers were staff members of AFIP, Drs. Lent C. Johnson and Walter Putschar. The third speaker, Dr. Leon Sokoloff, represented the National Institutes of Health.

The Public Health Committee of the Washington Board of Trade held its Spring Luncheon Meeting, April 19, at the Burlington Hotel. Dr. Oscar B. Hunter, Jr., Chairman of the Committee, presided. Dr. Donald R. Sickler, Chief of the Tuberculosis Control Division for the D. C. Department of Public Health, was present to speak on "Effect of Newer Therapy on Hospitalization for Tuberculosis." Dr. John R. Cavanagh, psychiatrist and Special Lecturer in Pastoral Psychiatry at Catholic University, discussed the "Effect of Newer Therapy on Hospitalization for Psychiatric Diseases."

On January 19, Dr. W. Ross Morris, President of the District Medical Society, and Dr. John R. Pate, Chief, Bureau of Disease Control, D. C. Department of Public Health, discussed "How Well Is Your Community Chest Dollar Spent in Hospitals?" before the Public Health Committee.

Dr. William C. Menninger, General Secretary of the Menninger Foundation, addressed a meeting of the **United Community Services** at the National Press Club, March 29. More than 500 persons attended the meeting, which was in the nature of a reception for members of the Senate and House District Committees.

The annual fund-raising campaign of the **District Division of the American Cancer Society** opened with a luncheon, April 3, at the Hotel Statler. Heading the drive, which was held here during the month of April, was Mr. Robert W. Wilson, Vice President of the Potomac Electric Power Company.

Dr. Calvin T. Klopp, President of the District Cancer Society, presented the St. George Medal to Attorney George E. Hamilton, Jr. for outstanding service to the cancer-control program. Mrs. George M. Peet spoke, from personal experience, on the subject, "The Hopeful Side of Cancer." Dr. Lowell T. Coggeshall, Special Assistant for Health and Medical Affairs to the Secretary of Health, Education and Welfare, gave the principal address on "Hope Through Research."

The national goal of the American Cancer Society in the campaign was $26,000,000, of which the District's objective was $295,000.

The Smith-Reed-Russell Society, an honor organization of George Washington University School of Medicine, held its annual banquet at the Mayflower Hotel, April 4. Thirty-seven medical students were initiated into membership in the Society. Elected to honorary membership were three members of the Medical School faculty, Dr. William Neuman, Assistant Professor of Pathology; Dr. Harold Stevens, Professor of Neurology; and Dr. Carleton R. Treadwell, Professor of Biochemistry. Drs. Neuman and Stevens are Active members of the District Medical Society. Lt. Thomas A. Dooley, MC, USN, was the banquet speaker.

GENERAL NEWS

The Executive Board of the Medical Society of the District of Columbia met in regular session, March 26. The Board voted to contribute $100 to the Student AMA Chapter of each of the three Washington medical schools to assist in paying the expenses of their delegates to the national convention in Chicago, May 4 6.

The resignation of Dr. Alfred A. J. Den as Chairman of the Committee on Professional Liability Insurance, effective on or before June 30, 1956, was accepted with regret and by an expression of appreciation from the Board for his valuable services.

Dr. Irving Burka was appointed delegate to the Board of Trustees of United Community Services, succeeding Dr. George Maksim, whose term expires May 31. Dr. Milton M. Greenberg was appointed to the Community Home Makers Committee of UCS.

Dr. Arthur A. Morris, Chairman of the Scientific Exhibits for the **Southern Medical Association meeting** in Washington, D. C., November 12–15, 1956, extends an invitation to all Washington physicians who have exhibit material to apply for space. While exhibits will be accepted from all members of the Southern Medical Association, local physicians will receive priority. Dr. Morris is anxious to make an excellent showing and would appreciate it if potential exhibitors would get in touch with him at an early date.

The Medical Society's **Committee on Emergency Medical Service** is asking for physicians who will make examinations of voluntary policemen serving under the Civil Defense Program for the District of Columbia. Examinations will be made at the Police and Fire Clinic. Physicians who wish to contribute their services should communicate promptly with the Committee, in care of the Medical Society, 1718 M Street, N.W., or telephone District 7-3111.

A Section on Internal Medicine and Allied Subspecialties of the Medical Society of the District of Columbia is now being established. Membership is open to Active and Associate members of the Society who are classified as practicing internal medicine and/or one of its subspecialties. Physicians who are interesting in becoming members of such a Section are invited to write to Dr. Henry D. Ecker, Acting Chairman, 917 20th Street, N.W., Washington 6, D. C., or to Dr. William K. Billingsley, Jr., Acting Secretary-Treasurer, 1801 Eye Street, N.W., Washington 6, D. C.

The U. S. Food and Drug Administration announces that the **Fourth Annual Symposium on Antibiotics** will be held in Washington, October 17–19, and, as before, will be co-sponsored by FDA and the journals *Antibiotics and Chemotherapy* and *Antibiotic Medicine and Clinical Chemotherapy.* Physicians wishing to participate in the program should submit abstracts before September 3 and manuscripts by September 17. The papers should be sent to Dr. Henry Welch, Director of the Antibiotics Division, Food and Drug Administration, Department of HEW, Washington 25, D. C.

The Board of Governors of the American Red Cross announced, April 9, the retirement of **Dr. David N. W. Grant** as **National Director of the Red Cross Blood Program** and named **Dr. Sam T. Gibson,** Associate Director since November, 1952, as his successor, effective June 15.

Dr. Grant joined the Red Cross staff in 1951 as Director of the Blood Program and Medical Director of the organization, following a distinguished military career which spanned 30 years. He became Chief of the Medical Services of the Army Air Force in 1939 and was Air Surgeon from 1941 to 1946, when he retired with the rank of Major General.

Dr. Gibson

Dr. Gibson has been on the Red Cross staff since July 1, 1949, when he became Assistant Medical Director of the Blood Program. He will become Director of the Blood Program and acting Red Cross Medical Director A native of Covington, Ga., he was graduated from the Georgia Institute of Technology in 1936 and from Emory University School of Medicine in 1940. After interning at Peter Bent Brigham Hospital, Boston, he went on active service with the Navy in October, 1941. He was stationed at the U. S. Naval Hospital, Chelsea, Mass. and at the Harvard Medical School, where he was engaged in evaluating and testing blood fractions. In 1943 he was transferred to the U. S. Naval Medical School, first as assistant in, and later as head of the blood and plasma department. In 1945 and 1946, he served as plasma and plasma fractionation control officer for the Navy. He left the Navy in 1946 with the rank of Commander in the Medical Corps Reserve.

CAT.

Dr. Gibson is an Associate in Medicine on the faculty of the George Washington University Medical School and a consultant to the Naval Medical School in Bethesda, Md.

The American College of Cardiology is sponsoring a unique **Clinical Workshop** program, which began in April and will carry through May, 1957. Under a "preceptor" relationship, a limited number of visiting physicians will be able to observe physicians at work in their own offices, laboratories or hospitals. Applications to participate in this program should be forwarded to Dr. Joseph B. Wolffe, Chairman, Valley Forge Heart Institute, Fairview Village, Pennsylvania. Regional co-chairmen for Washington, D. C. and vicinity are Drs. Irving Brotman and George W. Calver.

The list of preceptors is too long to be published in the ANNALS. Some 70 scientists are taking part, not one of them to receive remuneration of any kind for time or services. Included in the list of preceptors are the following Washington physicians:

Dr. J. E. Smith, Chief, Medical Standards Branch, Civil Aeronautics Administration. Subject: Ballistocardiography and Phonocardiography. Place: Laboratories of the Civil Aeronautics Administration and George Washington University Hospital, May 21–23. Limited to 5 physicians.

Dr. Leslie French, Associate Professor of Clinical Medicine, Georgetown University School of Medicine. Subject: Practical Electrocardiographic Analysis, Applied Physiology, and Cardiovascular Apparatus. Place: Prince Georges General Hospital in Cheverly. Limited to 10 physicians. Dates to be arranged.

Dr. George W. Calver, Attending Physician, Congress of the United States. Subject: Preventive Cardiology among Individuals in Public Life. Place: U. S. Capitol. Dates and number of physicians not yet scheduled.

Eighteen fellowships for residents in ophthalmology will be established over the next 3 years by The Guild of Prescription Opticians of America, Inc. These fellowships are given to encourage outstanding young physicians to become residents in ophthalmology by providing financial help during all three years of required residency.

Each fellowship will provide a total stipend of $1,800, payable in monthly installments over the 3-year period of residency. The fellowships are being provided on a regional basis with the selection of the recipient in each area to be made by a committee of ophthalmologists. **Dr. Benjamin Rones** is one of 12 in the Nation who will aid in selecting recipients. Applications and information may be secured from The Guild, 110 East 23rd Street, New York 10, New York.

Medical scientists and librarians testified before a Subcommittee of the Senate Labor and Public Welfare Committee, April 10, in support of a bill introduced by Senator Hill, of Alabama, and Senator Kennedy, of Massachusetts, which would establish a **National Library of Medicine,** the nucleus of which would be the present Armed Forces Medical Library. Among the witnesses urging the establishment of such a library were Dr. Alan Gregg, Vice President of the Rockefeller Foundation; Dr. Frank B. Berry, Assistant Secretary of Defense for Health and Medical Services; Dr. Lowell T. Coggeshall, Special Assistant to the Secretary of Health, Education and Welfare; Dr. Leonard A. Scheele, Surgeon General of the Public Health Service; Dr. William S. Middleton, Chief Medical Director of the Veterans Administration; Dr. Worth B. Daniels, representing the Society of Medical Consultants of the Armed Forces; and Dr. Francis M. Forster, representing the Association of American Medical Colleges.

At the hearings, April 11, Dr. Preston A. McLendon was present to express the views of the American Medical Association and the District Medical Society. Dr. John Parks also testified at the hearings on April 11; he represented the American Academy of Obstetrics and Gynecology.

The Washington Heart Association, Inc., through the Chairman of its Research Committee, Dr. John M. Evans, announces the following research fellowships and grants for the fiscal year 1956–57, beginning July 1, 1956:

Fellowships in clinical cardiology (postdoctoral) are open to graduates of approved medical schools, for training in the cardiovascular field; applications must be received on or before November 1, 1956. The fellowships are awarded for periods of 1 or 2 years, with a stipend of $3,600 per annum.

Grants are made to non-profit institutions in direct support of a particular investigator, for a specific program of research under his direction. Grants are awarded in support of research in the cardiovascular field or basic sciences related to it in amounts up to $5,000 per annum for periods of 1 or more years. Applications must be received on or before October 1, 1956, and May 1, 1957.

Further information and application forms may be secured from the Executive Director of the Washington Heart Association, Inc., 1154 19th Street, N.W., Washington 6, D. C.

The Commissioners for the District of Columbia have appointed two committees to advise the District Department of Vocational Rehabilitation. One, composed of 12 members, will be known as the **General Vocational Rehabilitation Advisory Council.** Named to this Council for a 3-year term was Dr. Preston A. McLendon, immediate Past President of the District Medical Society. Dr. W. Montague Cobb, President of the District Medico-Chirurgical Society, was named to the General Council for a 1-year term.

The Professional Vocational Rehabilitation Advisory Council will consist of 15 members. Appointed for 3-year terms were Drs. William J. G. Davis, Howard M. Payne, Harold Stevens, William J. Tobin and Charles S. Wise. Two-year appointments were given to Dr. Aubrey Fischer and Dr. Charles P. Waite.

Dr. John B. Barnwell, well known for his work in the field of tuberculosis, has been appointed Assistant Chief Medical Director for Research and Education in the Department of Medicine and Surgery of **Veterans Administration**, succeeding Dr. George N. Lyon. Dr. Barnwell has headed VA's Tuberculosis Service since 1946.

In his new position Dr. Barnwell will direct medical research and educational programs in VA's 173 hospitals.

The new **Providence Hospital** was dedicated, Palm Sunday, March 25, by cornerstone-laying ceremonies of a religious nature. More than 8,000 persons attended the dedication and inspected the new building.

The Most Reverend Amleto G. Cicognani, Apostolic Delegate to the United States, officiated at the dedication and cornerstone-laying. The Most Reverend Patrick A. O'Boyle, Archbishop of Washington, was one of the principal speakers. Presiding was Mr. John A. Reilly, President of the Hospital's Advisory Board. Mr. Reilly was Chairman of the public fund drive which led to the construction of the hospital at a cost of $8,250,000. Half the cost was paid by a Federal grant.

Providence Hospital was organized in 1861, two months after the War Between the States began, in the old Carroll Homestead on Capitol Hill and is the oldest hospital in the city.

The Philip Murray Memorial Foundation contributed $150,000 toward the Hospital's diagnostic clinic, which has been named for the late Mr. Murray.

The new hospital is situated at 12th and Varnum Streets, N.E. Patients at the old hospital at 2nd and D Streets, S.E., were moved to the new building on April 4. On the day following, new patients were admitted. It has beds for 350 patients.

The first checks, totaling $37,748,800, in the recent **Ford Foundation Grant to hospitals,** were mailed to more than 1,000 hospitals throughout the United States and its Territories on April 7. These checks were the first payments of $500 million in grants voted last December by the Foundation's trustees. The first institutions in Washington to receive checks were the following: Eastern Dispensary and Casualty Hospital, $35,550; Georgetown University Hospital, $97,450; Sibley Memorial Hospital $58,600. These initial payments represent one-half of the total grant for each institution.

All hospitals believed to be eligible have been advised by the Foundation and have submitted formal requests in accordance with the terms of the grant. The requests are now being processed by the Foundation, and as they are approved checks will be mailed for one-half the amount of each grant; the remaining half will be paid in March, 1957. By the end of July of this year all of the approximately 3,500 participating hospitals will have received payment of the first half of their grants.

The amount of each grant was determined in each case on the basis of patient-days of service and the number of births in each hospital. Each participating hospital will receive at least $10,000, and none will receive more than a maximum of $250,000.

An announcement from **Children's Hospital** states that the Sunday staff conferences, which have been held there for many years, will in the future be presented instead each Friday noon at 12:30 in the Wall Auditorium.

Georgetown University School of Medicine has received a grant of $106,145 from the National Cancer Institute. The grant will be used to support research conducted at the D. C. General Hospital by the Department of Medicine of Georgetown as part of a coöperative study aimed at the evaluation of new drugs which have a suppressive effect in advanced cancer.

PERSONALS

Dr. J. W. Bird, of Sandy Spring, Md., was honored at a dinner meeting, April 17, when the Woman's Auxiliary to the Montgomery County Medical Society presented him with a plaque in recognition of his many years of devoted service to his patients. On Doctors Day, March 31, the Auxiliary declared him Doctor of the Year for Montgomery County.

Dr. Bird is credited with forming a hospital committee in 1917, which took upon itself the task of constructing what became known as the Montgomery County General Hospital. It opened in 1920 with 28 beds. The Hospital now has under construction a modern maternity wing, which will increase the number of beds to 60.

Dr. Bird, an Associate member of the District Medical Society since 1927, graduated from the University of Maryland School of Medicine in Baltimore in 1907. He came to Sandy Spring in 1909. He is Chief of Staff of the Hospital he organized 36 years ago and has practiced medicine in Montgomery County longer than any other doctor there, almost 47 years.

Drs. Henry Monat and Jacob J. Weinstein were speakers at the Eighth Annual Convention of the International Academy of Proctology, held at the Drake Hotel, Chicago, April 23–26. The papers presented by these authors were entitled, "Present Management of Ulcerative Colitis with Special Reference to the Sprue Diet: Eight Years' Experience," by Dr. Monat, and "The Significance and Management of Associated Ano-rectal Diseases with Hemorrhoidal Diseases," Dr. Weinstein.

Dr. Weinstein is First Vice President of the Academy and Councilor for Washington. In addition to reading a paper, he took part in a Symposium on Fluids and Electrolytes in Gastrointestinal Surgery, which was moderated by Dr. Edward J. Krol, of Chicago.

Dr. Josephine J. Buchanan, Chief of the Department of Physical Medicine and Rehabilitation at D. C. General Hospital, has been appointed to the Hill-Burton Advisory Council by the District Commissioners.

Dr. Buchanan is well known for her work in the field of physical medicine. She is Assistant Professor of Physical Medicine and Rehabilitation at Georgetown University School of Medicine and is a member of the Executive Board of the Health Section of United Community Services. She is a consultant to the Goodwill Industries and to the Office of Vocational Rehabilitation.

Drs. Hugh H. Hussey, Edgar W. Davis, and Robert H. Detwiler were among the honorees at the annual Founders' Day Convocation of Georgetown University, March 22. Dr. Hussey, who is Professor of Preventive Medicine and Public Health, received a gold Vicennial Medal award in recognition of 20 years' service to the University in a full-time capacity. Dr. Davis, Professor of Thoracic Surgery, and Dr. Detwiler, Instructor in Pediatrics, received silver medals for the same number of years of part-time service. Dr. Detwiler is an Associate member of the District Medical Society.

Dr. Lawrence S. Lilienfield, of Georgetown University Hospital, was awarded a $3,600 fellowship by the Metropolitan Heart Guild at its annual Founders' Night, March 21. Dr. Lilienfield was recently elected to Associate membership in the D. C. Medical Society. This is the second successive year he has been chosen for the fellowship, for research in cardiology.

Speakers at the ceremony included Dr. Charles A. Hufnagel, of Georgetown University; Dr. John B. Johnson, of Freedmen's Hospital; and Dr. Kenneth McCoy, of Providence Hospital. At this same meeting, the Guild presented an electrocardiograph machine to representatives of the Children's Convalescent Home. The Junior Metropolitan Heart Guild presented the home with a table for the machine.

The Heart Guild serves indigent heart patients in the Washington Metropolitan Area. Operating funds come from its members and from various fund-raising events.

"Preparation for Retirement" was the panel subject introduced by **Dr. Thomas M. Brown,** Professor of Medicine, George Washington University School of Medicine, at the fourth Kellogg Lecture at the School of Medicine, March 26. **Dr. Edward J. Stieglitz,** Editor of *Geriatric Medicine,* discussed the emotional and medical problems of retirement, while Mr. Kenneth F. Brooks, Vice President and Trust Officer, and Mr. Henry K. Kierkoph, Trust Officer, both of Riggs National Bank of Washington, presented some important financial aspects in connection with retirement.

Dr. Ross T. McIntire, Executive Director of the International College of Surgeons, was a speaker at the banquet, April 30, held during the Southeastern Regional Meeting of the International College of Surgeons, at the Read House in Chattanooga, Tenn.

Earlier in the month, April 4, he gave the principal address at the banquet held during the 29th Annual Spring Congress in Ophthalmology and Otology, at Hotel Roanoke in Roanoke, Virginia. This Congress is sponsored annually by the Gill Memorial Eye, Ear and Throat Hospital. Dr. McIntire is an Honorary member of the District Medical Society.

Dr. Jack J. Rheingold, Associate in Medicine, and **Dr. Edward Adelson,** Instructor in Medicine, both of George Washington University School of Medicine, participated in the Military Medicine and Allied Sciences course at the Walter Reed Army Institute of Research. Dr. Rheingold discussed Hodgkin's disease and other reticulo-endothelial diseases, February 21, and Dr. Adelson described "Mechanisms and Tests of Coagulation" on February 28.

Dr. George N. Raines acted as consultant and participant in the Semi-annual Meeting of the Group for the Advancement of Psychiatry, which was held at Asbury Park, New Jersey, April 5–8. Dr. Raines, who is Professor of Psychiatry at Georgetown University School of Medicine and head of the Neuropsychiatry Branch of the Bureau of Medicine and Surgery, Navy Department, participated in the meetings of the Committee on Therapy.

A Symposium on the Acquisitions Policy of the proposed National Medical Library was held at the Armed Forces Medical Library on April 12. Among those who took part was **Dr. Benjamin Manchester,** Assistant Clinical Professor of Medicine, George Washington University School of Medicine.

At a meeting, March 29, held at the YWCA, **Dr. Benjamin Karpman,** Chief Psychotherapist at St. Elizabeths Hospital, was the speaker before the Corrections Section of UCS. He advocated mental hygiene clinics in every high school to find and correct mental problems in young people.

Dr. W. Proctor Harvey, Assistant Professor of Medicine and Director of the Heart Station, Georgetown University School of Medicine, was invited to address the American College of Physicians during its 37th Annual Session in Los Angeles, California, April 16–20. Dr. Harvey was a participant in the first General Session, April 16. He spoke on "Unusual Features of Severe Aortic Insufficiency and Criteria for Operation."

Ten faculty members of George Washington University were honored at an alumni luncheon, March 24, at the National Press Club, in recognition of 25 years of service for each. Included in this group were six physicians, all members of the District Medical Society. They are: Dr. Aubrey D. Fischer, Assistant Clinical Professor of Otolaryngology; Dr. Robert H. Harmon, Associate University Physician; Dr. Alec Horwitz, Associate Clinical Professor of Surgery; Dr. Julius S. Neviaser, Assistant Clinical Professor of Orthopedic Surgery; Dr. Gilbert Ottenberg, Associate in Urology; and Dr. Ernest A. W. Sheppard, Clinical Professor of Ophthalmology.

Deputy Under Secretary of State Robert D. Murphy was the principal speaker.

Dr. Frank J. Eichenlaub received the Old Timers' Award from Dr. Raymond A. Osbourn at the March 20 meeting of the Georgetown Clinical Society. Dr. Eichenlaub was thus recognized as the Society's outstanding Physician of the Year. Dr. Joseph

Dugan, President of the Society, presided at the meeting.

Dr. Preston A. McLendon was recently appointed a member of the D. C. Commissioners' Youth Council. Dr. McLendon is a member and Chairman of the Committee on Juvenile Delinquency of the American Academy of Pediatrics.

Dr. John R. Cavanagh was in Boston, March 13, where he addressed the 24th National Catholic Family Life Conference, describing some of the family problems which arise because of present-day living conditions.

Dr. Robert E. Moran addressed the American Goiter Association at the Drake Hotel, in Chicago, May 5, on the following subject: "Levator Spasms a Factor in Exophthalmos and Its Correction."

Dr. Allen M. McKelvie, an Affiliate member of the D. C. Medical Society, completed successfully the examinations of the American Board of Orthopedic Surgery in January, 1956.

Dr. Robert J. Fink addressed the monthly meeting of the Arlington County Medical Society, March 15, at the Washington Golf and Country Club. Dr. Fink is pathologist at Doctors Hospital and Director of the Isotope Laboratory at the Hunter Memorial Laboratory. He spoke on "Current Uses of Radioactive Isotopes."

Dr. Lawrence A. Pyle, Jr., Assistant Medical Director of the Chesapeake and Potomac Telephone Companies, was one of the judges for awarding the annual educational trophy to the industrial nurse who developed the most outstanding project on health, safety or welfare within her industry. The award was given to Mrs. Ruth Corder, of the Washington Gas Light Company, at the annual banquet of the Metropolitan Washington Industrial Nurses' Association, April 10.

There have been two recent resignations of Active members from the Medical Society:

Dr. Murray Grossan has established himself in the practice of ear, nose and throat in California and has offices at 8930 South Sepulveda Blvd., Los Angeles.

On November 15, **Dr. Edward C. McGarry** began active practice in Dayton, Ohio. He is Assistant Director of the Diagnostic Laboratories of the Miami Valley Hospital.

MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, March 26, 1956, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Paul Bender, 1150 Connecticut Avenue, N.W.
Lewis H. Biben, 7420 Western Avenue
Robert P. Crawford, 1922 Benning Road, N.E.
John S. Harrington, 3810 12th Street, N.E.
Bernard A. Harrison, 2480 16th Street, N.W.
Robert S. Jason, 520 W Street, N.W.
Charleen G. Kirkpatrick, 1726 Eye Street, N.W.
Creed F. McFall, Jr., 827 Cox Avenue, Hyattsville, Md.
Roland W. Penick, Children's Hospital
David H. Weaver, 1740 18th Street, N.W.
B. Edward Wyman, 3829 Pennsylvania Avenue, S.E.

Associate Members

Joseph J. Bunim, 7506 Maple Avenue, Chevy Chase, Md.
Robert Guillaudeu, 3759 Keller Avenue, Alexandria, Va.
Mark H. Lane, 3100 Connecticut Avenue, N.W.
Leon R. Levitsky, 4403 28th Place, Mt. Rainier, Md.
Edward K. Pearson, 2874 S. Abingdon Street, Arlington, Va.
John C. Rose, Georgetown University Hospital
Henry Turkel, 650 W. Boston Blvd., Detroit, Mich.
Leslie Upton, 6404 Woodway Street, Alexandria, Va.

Resident-Intern Members

Joseph Kayle Perloff, 4124 Edmunds Street, N.W.
Jonas B. Robitscher, Jr., 1234 28th Street, N.W.

The following applicants for membership will be voted on at the meeting of the Executive Board, June 25, 1956.

For Active Membership

William D. Byrne, Georgetown University—1948
Wallace Lane Chan, Stanford University—1953
Charles David Cooper, George Washington University—1951
Pasquale DeFelice, Georgetown University—1952
Thomas A. Gilday, Cornell University—1952
Francis Carlyle Kirchner, George Washington University—1952
Steven Oristian, Georgetown University—1951

John R. Portaria, Aurora University, Shanghai, China—1937
Constance Ann Quarles, Howard University—1950

For Associate Membership

Clyde O. Brindley, Duke University—1943
Roman Folwarkiw, Federal-State University, Innsbruck, Austria—1950
Robert Lynwood Howard, George Washington University—1951
Magdeleno L. Jardeleza, Baylor University—1921
John T. Lynn, Jr., Jefferson Medical College—1953
John McMillan Mennell, Cambridge University, Cambridge, England—1939
James H. Nelson, Queens University, Kingston, Ontario—1947
John A. Turner, D.D.S., Howard University—1926

For Resident-Intern Membership

Niroslava Marie Vozenilek, Université de Lausanne Faculté de Médecine, Lausanne, Switzerland—1949
Zavis Joseph Vozenilek, Université de Lausanne Faculté de Médecine, Lausanne, Switzerland—1949

CORRESPONDENCE

WASHINGTON, D. C., February 24, 1956

TO MR. WIPRUD:

Approximately two years ago I spoke to you about the formation of an organization in Southeast Washington interested in the building of a community hospital for this area. At the time plans were still in a nebulous stage and you felt that when more progress had been made it should be brought to the attention of the Medical Society.

Last year this group, composed of local businessmen, representatives of PTA, service and civic organizations, and physicians, incorporated under the name of the Greater Southeast Hospital Foundation, Inc., and elected a Board of Trustees, officers and committees. The discussions have progressed to the extent that this organization hopes soon to obtain option on land and begin a campaign for funds.

The physicians in Southeast Washington were called together about two years ago by the originators of this idea to obtain from them, first, their support and, secondly, their opinion as to type and size of hospital this area might require. Appreciating the fact that there is a need for hospital facilities in this area, the physicians at that time supported the idea. Now that some progress has been made, I am sure the physicians will soon be called upon again to proclaim their support. I, therefore, felt that now would be the proper time to ask if you would present to the Executive Committee of the District of Columbia Medical Society the plans of this Southeast Group, and obtain for us the support and sanction of the Medical Society of the District of Columbia.

Very truly yours,
FRANK S. PELLEGRINI, M.D.

BOOK REVIEW

Office Procedures. PAUL WILLIAMSON, M.D. Price, $12.50. Pp. 412, illustrated. Philadelphia: Saunders, 1955.

This book was compiled from notes on useful procedures, gathered by a practicing physician. It is intended to provide the practitioner with useful methods of examination and treatment for most of the situations arising in a general practitioner's office. Many of the methods of examination and therapy seem original, derived, no doubt, from the author's experience. Of special value to the general practitioner is the fact that no complicated instruments are suggested. Rather, simple objects such as paper clips and tongue blades are used for retraction and splinting to demonstrate that complicated equipment is not necessary.

"Office Procedures" is divided into 15 sections. These include, in addition to minor surgery, obstetrics, and ear, nose and throat, such unusual subjects as psychologic testing, anesthesia, physiotherapy, roentgenology, and the small laboratory. A generous section on internal medicine describes, among other subjects, the performance of a thorough vascular examination of the extremities, testing for contact dermatitis, and the appearance of *Pediculus capitis.* Office proctologic procedures are well described and illustrated. Useful office technics of urology, gynecology, and orthopedics are also covered.

Abundant illustrations are provided in each section. They are simple line drawings for the most part, semi-diagrammatic, intended to show specific points in the text.

This book is unique in its coverage. It is an excellent practical handbook for the busy general practitioner.

WILLIAM S. MCCUNE, M.D.

BENJAMIN LEWIS JAMISON, B.A., M.D.
(1922–1956)

Dr. Benjamin L. Jamison, one of the younger Active members of the District Medical Society, died, February 8, 1956, at Garfield Memorial Hospital.

Dr. Jamison was born in Prince William County, Virginia, June 21, 1922. His parents, George L. and

Mrs. Leola Rose Jamison, survive him. After receiving his early education in Covington, Va., he attended the Appalachian State Teachers College in Boone, N. C. for 2 years, and in 1943 received his B.A. degree from Bridgewater College, Bridgewater, Va.

He enrolled at the Medical College of Virginia, in Richmond, under the Navy V-12 program, graduating from the College in 1947. The following year he interned at the University Hospital in Baltimore, and for the next three years he was a resident in psychiatry at St. Elizabeths Hospital, 1948 to 1951. In 1952 he was appointed Junior Staff Officer at this Hospital, in which position he served for a year before going into private practice.

Dr. Jamison was associated with the Washington Institute of Mental Hygiene. He also received a diploma in psychiatry from the Washington School of Psychiatry in 1954. His home and offices were at 3700 Connecticut Avenue, N.W.

Dr. Jamison was elected to Active membership in the Medical Society of the District of Columbia in 1952; he was a member of the Washington Psychiatric Society, the Medical Society of St. Elizabeths Hospital, and Alpha Omega Alpha Fraternity.

In addition to his parents, he is survived by his wife, Mrs. Ruth Breneman Jamison, and five brothers and a sister.

LEE JARVIS, B.S.
(1896–1955)

Mr. Lee Jarvis, an Associate member of the Medical Society of the District of Columbia, died June 19, 1955. His death was only recently reported to the Executive Offices of the Medical Society.

Mr. Jarvis was born, June 12, 1896 in New York City. He received his Bachelor of Science degree in statistics from the South Boston College in 1920. Some years later he enrolled for postgraduate study in medical administration at the University of Chicago, completing the course in 1937.

Mr. Jarvis was employed at Cook County Hospital in Chicago from 1938 to 1942, working as a researcher and medical statistician. During World War II he was on active duty in the Army of the United States with a commission of Captain. He served from October, 1942, until January, 1946, with more than two years of overseas duty in the European theater. In March, 1946, he accepted a position with the Veterans Administration, in the Department of Medicine and Surgery. At the time of his death, he was a statistician in the Navy Department.

He was a member of the American Public Health Association, the American Research Foundation, the Illinois State Historical Society, and the Association of Hospital Administrators. He was an Associate member of the District Medical Society from 1948 until his death.

Surviving him is his wife, Mrs. Ruth E. Jarvis, who resides at their home at 8 Forrester Street, S. E.

Chlorpromazine and Reserpine—Hoffman

(*Continued from page 268*)

wards. The wards—even the most disturbed ones—are more quiet.

Electric shock treatment has been restricted to a very small number of patients, perhaps a dozen a year; these are patients suffering from retarded depresssions who do not respond well to these drugs.

We have not performed frontal lobotomy for psychiatric reasons since we began using these drugs.

The effect on the morale of personnel and on the relatives of our patients has been most gratifying.

It is too early to fully evaluate our data on the movement of our patients, but we have noted a steady, moderate decline in our average daily population during the past 4 months and an increase in the number of patients able to stay out of the Hospital on visit status. If this trend is continued it may represent a most significant alteration in mental hospital operations.

We are beginning to consider possible needs for modification of our staffing and building patterns. Perhaps we will need more therapists of all types and fewer attendants who function largely as guards; more activity space and less space for electric shock therapy; fewer wards with steel screens or iron bars; more social service workers and rehabilitation and vocational counselors.

Thus far the application and use of these drugs has been largely empirical. However, it may be that the "breakthrough" in psychiatry—if I may use that intriguing word with uncertain meaning—is at hand.

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *June*, 1956 NUMBER 6

THE CLINICAL APPLICATION OF A SIMPLE BEDSIDE TECHNIC FOR MEASURING BLOOD VOLUME*

ROBERT H. GRUVER, M.D.
Chief Medical Resident, Veterans Administration Hospital, Washington

IN MOST general hospitals the problem of acute hemorrhage is frequently encountered. When the blood loss has been rapid and extensive, the hematocrit provides a poor index of the extent of blood loss since hemodilution has not yet taken place. In such instances the determination of blood volume deficit by a simple rapid technic would be most helpful in evaluating blood loss. The T-1824 dye method (Evans blue dye) as currently used provides a method of plasma volume determination. However, this requires a spectrophotometer and a technician skilled in the use of this instrument. In addition, many bleeding patients are admitted at night when a technician may not be available immediately. Since the situation is frequently acute and requires immediate assessment of the extent of blood loss, an attempt was made to modify the dye method so that blood volume could be determined on the ward with reasonable accuracy with the use of readily available equipment.

METHOD

Plasma volume determination with the T-1824 dye method depends on the intravenous injection of a standard amount of dye, permitting adequate time for the thorough mixing in the circulating blood and then measuring the extent of dilution of the dye. The volume dilution is determined by comparing the concentration of dye in a plasma sample drawn 15 minutes after injection with a sample of plasma drawn prior to injection. It seemed possible that for clinical purposes sufficient accuracy could be obtained by comparing visually the T-1824 concentration in the plasma sample with a series of standards representing known dilutions of the dye.

A 0.5 per cent solution of T-1824 is available commercially in ampules containing precisely 5 c.c. The dye is drawn up in a syringe, the empty dye ampule rinsed with saline, and this washing also is drawn up into the syringe to insure obtaining all of the dye. Fifteen c.c. of blood is withdrawn by venipuncture, and the blood sampling syringe is detached from the needle. The syringe containing dye is attached to this needle and the dye injected. The plunger of the dye syringe is drawn back once or twice to flush out all dye into the circulation.

---

* This paper was selected for the First Award of $100 in the Medical Essay Contest for House Officers, sponsored by the Editorial Board of the MEDICAL ANNALS during 1955 56.

A few c.c. of blood from the sampling syringe is placed in an oxalate flask for hematocrit. The remaining blood (10 c.c.) is placed in a centrifuge tube containing 2 drops of heparin. To prevent hemolysis blood should be run gently down the side of the centrifuge tube, care being taken to exclude all air bubbles which may be in the syringe. The tube is gently inverted several times to prevent clotting.

After 15 minutes 10 c.c. of blood is obtained from a vein in the opposite arm and placed in another centrifuge tube containing 2 drops of heparin (again excluding all bubbles). The tube is gently inverted to prevent clotting. Both blood specimens are centrifuged, the plasma drawn off and placed in (Kahn precipitin) test tubes. A series of standard dilutions were made up with the dye in distilled water and representing plasma volumes from 1,000 c.c. to 3,500 c.c. in increments of 250 c.c. Gregersen and Gibson[1] pointed out that the light absorption of T-1824 dye in plasma differs slightly from the absorption of the dye in water. Studies in our laboratory have confirmed this, and hence allowance must be made for this difference in the preparation of the standards. The technic of preparing such standards will be reported in another article.[2] A wooden comparator block was made in which the dyed plasma is backed up with a tube containing distilled water. The undyed plasma is backed up with the various standards until the light intensity matches the dyed plasma sample (figure 1).

Preliminary trials comparing the color of the 2 samples showed a relatively poor correlation with the spectrophotometer determination because of differences in color between the dyed plasma, which often appeared in varying shades of green, and the blue standard dilutions. This color difference was eliminated by covering the viewing slits with a gelatine filter (Wratten A) with maximal absorption at a wavelength of 610. By viewing in a strong light (X-ray viewbox or other fluorescent source) it was possible to compare light intensities only without color interference.

Plasma volume was determined by the visual comparator in 12 subjects and the results checked with the use of a spectrophotometer. The agreement was close, the average deviation between the 2 methods being 4.1 per cent and the maximum being 10 per cent. These results will be published in detail elsewhere.[2]

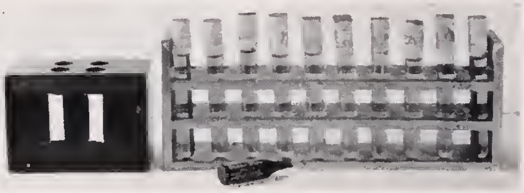


FIG. 1. Comparator block on left; on right a test tube rack containing the standard dilutions. In the foreground is an ampule of T-1824 dye.

Various studies have shown that the average normal plasma volume is approximately 42 c.c. per kilogram of body weight (40-45 c.c./Kg.).[3, 4] The expected or "normal" plasma volume for each patient under study was determined by multiplying his weight in kilograms by 42 c.c. The plasma volume deficit was obtained by subtracting the actually measured plasma volume from the expected plasma volume. The total blood volume was calculated in the usual way by dividing the plasma volume by the plasmatocrit (1 minus the hematocrit in hundredths). The expected normal total blood volume was calculated by dividing the expected normal plasma volume by a plasmatocrit of 0.58 (1 minus 0.42). The total blood volume deficit was obtained by subtracting the actual total blood volume from the expected normal total blood volume. Red cell volumes were obtained by subtracting the respective plasma volumes from the total blood volumes.

CLINICAL RESULTS

A total of 21 patients exhibiting blood loss have been studied thus far. The results show that the hematocrit is often an inadequate index of the degree of blood loss (table 1).

TABLE 1

Values for Hematocrit, Plasma, Red Blood Cell Mass and Total Blood Volume Deficits in 21 Patients with Blood Loss

Patient	Diagnosis	Hematocrit	Plasma Deficit in c.c.	RBC Mass Deficit in c.c.	Blood Volume Deficit in c.c.
1. H. I.	Bleeding from bladder	40	960	965	1,925
2. P. O.	Bleeding duodenal ulcer	20.5	800	1,900	2,700
3. P. A.	Bleeding duodenal ulcer	37	1,275	1,225	2,500
4. W. B.	Bleeding duodenal ulcer	38	312	479	791
5. H. T.	Bleeding duodenal ulcer	40	50	215	265
6. H. E.	Bleeding esophageal varices	29	900	1,530	2,430
7. R. I. C.	Postoperative nephrectomy	37	190	515	705
8. R. I. N.	Bleeding duodenal ulcer	25	453	1,342	1,795
9. D. O.	Bleeding duodenal ulcer	33	509	976	1,485
10. O. P.	Bleeding lesion of large bowel	33	600	1,377	1,977
11. S. C.	Bleeding duodenal ulcer	31	404	943	1,347
12. W. I.	Bleeding duodenal ulcer	40	1,301	1,059	2,360
13. F. O.	Bleeding duodenal ulcer	20	951	1,479	2,430
14. U. E.	Bleeding duodenal ulcer	37	210	620	830
15. F. I.	Bleeding duodenal ulcer	40	650	614	1,264
16. D. I.	Bleeding duodenal ulcer	38	1,320	1,240	2,560
17. C. V.	Bleeding duodenal ulcer	48	1,195	347	1,542
18. W. I.	Postoperative prostatectomy	42	975	720	1,695
19. E. M.	Bleeding duodenal ulcer	28	685	1,225	1,910
20. C. P.	Bleeding duodenal ulcer	22	140 excess of normal	1,224	1,084
21. R. H.	Bleeding duodenal ulcer	22	380	1,713	2,093

It is apparent that there is frequently a wide discrepancy between estimates of blood loss in the patient with early hemorrhage by the hematocrit and by plasma deficit, red blood cell deficit, and total blood deficit. When a patient bleeds the hematocrit initially remains unchanged, since both elements of the blood (plasma and cells) are lost. As the blood loss progresses the body begins to retain fluids in an attempt to maintain a normal total blood volume, and therefore hemodilution takes place. As a consequence of this hemodilution the plasma deficit is largely overcome, the red cell deficit becoming proportionately greater than the plasma deficit. It is only after such hemodilution, which may take several hours, that the hematocrit falls. Therefore, the patient with rapid hemorrhage seen early may have a normal hematocrit. Blood volume determinations would show that this patient has equal deficit of plasma and red cells. The patient with more prolonged bleeding will have predominantly a red blood cell deficit and will have a lowered hematocrit. Occasionally a patient is seen with a history of gastrointestinal bleeding and is found to have a low hematocrit and tachycardia. This might be interpreted as acute hemorrhage with impending shock. The determination of plasma deficit, erythrocyte deficit, and total blood deficit may demonstrate only the presence of chronic blood loss, and the tachycardia may be due to pain, some other disease, or perhaps some medication such as an anticholinergic drug.

In no case to date have we been lulled into false security using the blood volume technic. On the contrary, there have been many cases in which therapy has been more vigorous because of the discovery by this technic of an alarming degree of blood loss.

REPORT OF CASES

Case 1. H. I., a 30-year-old Negro, was admitted to the Urology Service with hematuria. Cystoscopy performed at 10 p.m. on the day of admission revealed bleeding from the bladder mucosa. At 4 a.m. the patient developed shock and the blood pressure was unobtainable. The hematocrit at that time was 40 per cent, repeated twice. Because of the relatively normal hematocrit it was thought by the resident staff that the shock was not due to blood loss. An electrocardiogram was normal. Blood volume determinations revealed a plasma deficit of 960 c.c., an erythrocyte volume deficit of 965 c.c., and a total blood volume deficit of 1,925 c.c. This deficit, which represented 38 per cent of his expected normal blood volume, appeared sufficient to explain the shock syndrome. There was prompt clinical improvement following administration of 1,500 c.c. of whole blood.

Case 2. P. O., a 33-year-old Negro, was admitted to this Hospital with bleeding of several days' duration from a duodenal ulcer. The hematocrit on admission was 20.5 per cent. The total blood volume deficit was 2,700 c.c. However, of the total, the plasma volume deficit was only 800 c.c., while the red blood cell deficit was 1,900 c.c. The patient was given 8 units of whole blood, which brought the hematocrit to 40 per cent. Eight units of blood represents the rapid infusion of 4,000 c.c. of fluid with a resulting increase of total blood volume to 1,300 c.c. above the normal. In this young patient such overloading of the vascular bed produced no complications, but in an elderly cardiac patient it might have precipitated acute cardiac decompensation. This patient should have received 3 units of whole blood and 5 units of packed red blood cells to restore both plasma and cell volumes to normal.

Case 3. P. A., a 40-year-old white man, gave a history of duodenal ulcer and symptoms of acute gastrointestinal blood loss just prior to admission. On examination he was found to have tachycardia and a blood pressure of 90/60, with a hematocrit of 37 per cent. Bedside blood volume determinations showed a total blood volume deficit of 2,500 c.c. with a plasma deficit of 1,275 c.c. and an erythrocyte deficit of 1,225 c.c. Four units of whole blood (2,000 c.c.) was given rapidly, and blood volume determinations were repeated several hours later. These revealed a deficit of only 500 c.c., equally divided between cells and plasma. In this case the first blood volume determination revealed the extent of blood loss and the type of replacement necessary (whole blood). The second blood volume determination showed that the patient had had no further significant bleeding after he entered the Hospital.

Case 4. W. B., a 50-year-old white man, was admitted with the diagnosis of bleeding duodenal ulcer. The initial hematocrit reading was 38 per cent. The total blood volume deficit was only 791 c.c. (18 per cent of expected normal blood volume) with a plasma deficit of 312 c.c. and erythrocyte deficit of 479 c.c. The patient looked reasonably well, but the pulse was quite rapid at 140 per minute. The blood pressure was 105/85 mm. Hg. Because of the history of bleeding and the tachycardia the resident physician was concerned over the possibility of severe, rapid blood loss. The blood volume determinations did not bear this out. It was then observed that the patient had received methantheline bromide (Banthine) intramuscularly. After the drug was discontinued the pulse rate gradually decreased to 90 per minute. Later the patient was placed on propantheline bromide (Probanthine) by mouth, and the pulse rate rose to 120 per minute. Follow-up studies confirmed the fact that the tachycardia was not due to rapid blood loss. After the administration of 250 c.c. of blood another volume determination showed a blood deficit of only 590 c.c.

Case 5. H. T., a 51-year-old white man, was admitted to the Hospital because of melena. He gave a history of intermittent epigastric pain relieved by eating. The initial hematocrit was 40 per cent. The blood volume deficit was 265 c.c., of which the red blood cell deficit was 215 c.c. and the plasma deficit 50 c.c. The patient continued to bleed and 24 hours later underwent a subtotal gastrectomy. During this procedure blood was given rapidly, and while still on the operating table the patient developed a tachycardia and became cyanotic. Another blood volume determination revealed an excess of 900 c.c. of red blood cells above the expected normal, and a normal plasma volume. One thousand c.c. of blood was withdrawn by phlebotomy, and the patient immediately improved, with a return to normal heart rate and good color.

DISCUSSION

It has become apparent that there is a distinct difference between patients with acute blood loss and those in whom bleeding has been prolonged over several days. Those with recent hemorrhage, that is, within a few hours, showed an almost equal deficit of plasma and red cell volume and usually had hematocrits above 37 per cent, despite severe depletions of total blood volume. However, the group with prolonged bleeding all showed a far greater deficit of red blood cell volume than of plasma volume, and in these the degree of blood loss usually was reflected in the hematocrit.

Patients with acute hemorrhage illustrate the difficulty of assessing the extent of blood loss by means of the hematocrit. However, in patients with chronic blood loss both the plasma and total blood volume values will underestimate the extent of the red blood cell loss. The reason for this is that there is a compensatory expansion of plasma volume in such cases. Therefore, the most reliable index of the extent of blood loss is the red blood cell volume deficit, and this should be used in preference to the plasma or total blood volume.

By utilizing the blood volume technic in patients with hemorrhage it is possible to evaluate the extent of blood loss and to determine the time element in the bleeding (acute, chronic, or acute and chronic). In addition, it furnishes a guide toward the type and amount of replacement therapy. Finally, repeated blood volume examinations after a period of time provide information as to the presence and extent of continued hemorrhage since the initial blood volume determination.

SUMMARY

The need for a rapid simple technic for evaluating blood volume is desirable, since the hematocrit provides a poor index of the extent of blood loss in patients with acute hemorrhage. The visual comparator with the use of standard dilutions of T-1824 dye provides such a technic. Preliminary work shows good correlation with spectrophotometric determinations. This method utilizes only equipment that is available on medical wards and does not require a skilled technician. Our study on 21 patients with hemorrhage of various origins has shown its usefulness in evaluating the patient and planning blood replacement. The technic of determining plasma deficit, erythrocyte deficit, and total blood volume deficit seems to provide a more reliable guide to blood replacement than the hematocrit. The red blood cell deficit rather than the plasma or total blood volume deficit appears to be the most reliable guide in either acute or continued blood loss.

BIBLIOGRAPHY

1. GREGERSEN, M. I., AND GIBSON, J. G., JR.: Conditions affecting absorption spectra of vital dyes in plasma. Am. J. Physiol., 1937, **120**, 494.
2. GRUVER, R. H., AND FREIS, E. D.: Current laboratory studies, to be reported.
3. INKLEY, S. R., BROOKS, L., AND KRIEGER, H.: Study of methods for prediction of plasma volume. J. Lab. & Clin. Med., 1955, **45**, 841.
4. WHITING, J. A., AND HOTZ, R.: Evaluation of Evans blue dye T-1824 method for studying circulating blood volume. Surg., Gynec. & Obst., 1953, **97**, 709.

THE FUNCTIONING CARCINOID TUMOR—A NEW CLINICAL ENTITY

Review of the Clinical Features of the Nonfunctioning and Functioning Carcinoid, Including a Review of Thirty-eight Cases from the Literature.* Part II.

COLONEL THOMAS W. MATTINGLY

Medical Corps, United States Army; Chief of Cardiology Service, Department of Medicine, Walter Reed Army Hospital, Washington

Pathologic Feature and General Symptoms of Functioning Carcinoid

In a review of the 21 cases with autopsies from the literature, a marked consistency is seen in the pathologic findings as well as in the clinical features noted prior to death. In all, the primary site of the carcinoid tumor was in the small intestine, with 17 being found in the ileum, 2 in the jejunum, and 2 in an unspecified location in the small intestine. All had nodal and hepatic metastasis, and ovarian metastasis was frequent in the female patients.

The cardiac lesions consisted of the presence of scattered or diffuse endocardial fibrosis and thickening of the right atrium and ventricle, with a similar fibrotic thickening and deformity of the valves and tendinous cords, especially in those of the right side of the heart. This fibrotic process usually resulted in a slight to severe degree of stenosis of the pulmonary valve. In the tricuspid valve, where the fibrotic process involved both the valve and tendinous cords, an insufficiency usually developed, but occasionally a valve stenosis resulted.

Right ventricular hypertrophy of a significant degree developed when the pulmonary valve stenosis was pronounced, and usually the right atrium was abnormally dilated as a result of the associated tricuspid valve deformity with insufficiency. In 1 instance[22] there was a combination of pronounced stenosis of the pulmonary and tricuspid valve, and right ventricular hypertrophy did not occur, but right atrial hypertrophy and dilatation were pronounced.

Occasionally mild sclerotic changes were seen in the left side of the heart, including the valves, but such changes were not considered significant in the majority of the cases. However, in the 2 cases reported by Bean[45] and in the 1 with autopsy and reported by McKusick[33] the lesions in the left side of the heart were considered more than the usual slight sclerosis seen in many elderly patients. This, perhaps, is significant. One such patient had an open foramen ovale which was considered a possible explanation for exposure of the left side of the heart to the returning venous blood with a high serotonin content.[33]

The exact nature of the endocardial fibrosis and valvular deformities is not known but is considered to be related in some manner to the carcinoid. No stigmata of rheumatic fever were found in these hearts. In 1 case[33] the pathologic process was described as an "organizing valvulitis with mononuclear cellular infiltration." The pathogenesis of the endocardial and valvular changes and its peculiar localization to the right side of the heart are not known. Hypothetical considerations of the direct sclerosing effects of excessive serotonin on these tissues, excessive thrombocytosis, and abnormal right-sided strain have been given as explanations,[15, 33] but similar changes have not been reproduced experimentally in animals. Localization to the right side of the heart has been explained on the theoretical consideration of inactivation of excessive serotonin by the lung tissue in the passage of the blood through the lungs, but again such is not substantiated by the finding of different values of serotonin in arterial and venous blood.[15]

---

* This is the sixth of a series of comprehensive reference articles on topics of current medical interest prepared by invitation for the Medical Annals. It is being published in two parts, of which this is Part II. Part I appeared in the May, 1956 issue.

Occasional skin biopsy specimens taken during life and sections from necropsy have shown no distinctive skin lesions. Greatly dilated capillaries, venules and small veins are seen which account for the telangiectases during life. Thickening of the skin is reported, and some perivascular cellular reactions are seen, but these are nonspecific. Specific changes have not been described in the lungs or the brain.

The predominant symptoms and findings have been tabulated under the heading of gastrointestinal, metabolic, cutaneous vascular, and cardiovascular.

The gastrointestinal symptoms are no different from those seen in the symptomatic malignant carcinoids of the small intestine which we now consider as clinically functioning. These are chiefly diarrhea and recurrent bouts of abdominal pain. The "diarrhea" in these patients occurs as frequent stools which may be watery or semisolid and contain no blood, pus, or mucus. There are no associated griping and tenesmus as seen in irritative diarrheas. It is postulated that both the frequent stools, which may be as many as 20 to 30 a day, as well as the abdominal pain are caused by increased intestinal peristalsis and hypermotility resulting from the effects of increased serotonin on the muscle of the bowel. Roentgenographic examinations of the intestinal tract show hypermotility of the bowel. Abdominal findings in late stages usually reveal a nontender, nodular, enlarged liver. At times other abdominal or pelvic masses are palpated, and ascites is often present, especially in the terminal stages.

The systemic or metabolic symptoms and signs are not specific, but when rapid weight loss, muscular wasting, cachexia and weakness are seen with the classical cutaneous vascular phenomena, a functioning carcinoid should be suspected. Anemia is not common, but serum proteins were low in some patients. Metabolic studies, as performed by Sjoerdsma and associates,[15] suggest an actual niacin deficiency, and specific studies for such a deficiency offer a possible diagnostic aid. Although the general symptoms of weight loss, weakness, muscle wasting, etc., are seen in metastatic cancer of many types as a result of necrosis, anemia, poor food intake and toxemia, these factors are not present to any great extent in functioning malignant carcinoids. Such metabolic symptoms and signs are considered to be the result of abnormally high utilization of the essential amino acid, tryptophan, in the production of large amounts of serotonin.[15]

The cutaneous vascular lesions are the most characteristic and consistently recognized of all the clinical features. Such are usually manifested by the presence of some form of paroxysmal or persistent erythematous flushing of the skin, predominantly of the face and neck, but variable in extent and location. This may also involve the entire body. Various terms have been used to describe the color changes, such as brick red, fiery red, bluish-red, mottled bluish-red, purplish-red, violaceous, or admixtures of red flushing and patchy cyanosis. When seen in the terminal stages, when there is associated peripheral congestion and stasis, it has been described as a "peculiar cyanosis," without evidence of arterial unsaturation. When the cutaneous vascular phenomena have been present for prolonged periods, dilatation of the capillaries and venules of the skin often develops, especially in the face and lower extremities, with the occurrence of miliary and gross telangiectasia.

The spontaneous paroxysmal occurrences, with rapid changes in appearance and color, are perhaps more striking and diagnostic than the actual color and character of the skin itself. The frequency and the duration of paroxysms, as well as apparent precipitating factors and associated symptoms, differ greatly in the cases described in detail. The flush may be momentary or it may last for days; it may persist in mild form on the face with paroxysmal intensification and spread to other parts of the body. Frequently there is an associated sensation of local heat, tingling, or tightness of the skin and even an appearance of swelling of the skin. Palpitation, tachycardia, and dizziness are common during attacks. Sensation of impending syncopy and hypotensive states have occurred. Episodes of flushing may occur spontaneously but are described as being provoked by emotional stress, eating, smoking a cigarette, alcohol intake, and evacuation of the bowels, or by abdominal, pelvic, or proctoscopic examinations.

Episodes have occurred upon palpation of tumor masses of metastatic carcinoid in the testes,[58] palpation of a pelvic mass on pelvic or proctoscopic examination,[59] or massage of a metastatically involved liver.[15] Intravenous histamine has been reported to initiate episodes of flushing.[59] The presence of these peculiar vasomotor phenomena and cyanosis occurring for the first time during or after surgery should cause one to suspect a functioning carcinoid. There have been no consistent changes in blood pressure during the paroxysms of flushing,[15, 61] but, in general, when severe, the pressure drops,[59] as would be expected with marked vasodilatation. Distressful tightness in the throat and frank asthmatic symptoms have occurred during the height of flushing. The total duration of recognized cutaneous vascular phenomena before death has been variable and has been observed over a period of years. In a few patients it was noted only as a terminal event but could have been overlooked earlier.

The pathogenesis of the flushing, cyanosis, and miliary telangiectasia is not known. Dilatation and contraction of the skin vessels is probably the eventual mechanism which results in the color changes as well as the complicating telangiectasia. This could result from local effects of vasoactive material on blood vessels or nerves or from a central action in the brain. The flush cannot be produced by acute intravenous injection of serotonin. It is interesting that the acute flush greatly simulates the vasodilatation and flush seen following the intra-arterial administration of nicotinic acid.

CARDIOVASCULAR SYMPTOMS AND SIGNS

Symptoms of progressive exertional dyspnea and fatigability were the most frequent cardiac symptoms and were often of long duration. Edema of the lower extremities occurred early in some patients and was present in the terminal state. This does not necessarily indicate cardiac failure, since the presence of intra-abdominal metastatic tumors, liver metastases, and low serum proteins could be factors. Since tricuspid incompetency was frequently found at autopsy or recognized during life from clinical features, hepatomegaly, ascites, and edema of the lower extremities would be expected to be frequent. Abnormal cardiac findings were noted during life in all the patients with autopsy and were correctly diagnosed as pulmonary stenosis and/or tricuspid insufficiency in some, but in cases prior to 1954 these were not recognized as being related to the presence of a carcinoid tumor. Several patients had right-sided heart catheterization and angiocardiograms,[9, 15] which showed lesions of the pulmonary and tricuspid valves.

A terminal picture of right-sided congestive failure existed in the majority of the deceased patients and in some of the living patients (table 3*). Cardiac symptoms and abnormal signs have not been present in all carcinoids showing characteristic cutaneous vascular lesions or in all having chemical evidence of a functioning carcinoid (table 2* and table 3). It is not believed that sclerotic lesions in the heart are a necessary part of the clinical picture of a functioning carcinoid, and perhaps they occur only as a late manifestation. McKusick[33] has suggested that the presence of cardiac lesions may depend upon the amount of serotonin reaching the right side of the heart, which in turn could be related to the location of the metastatic tumor. The presence of large extrahepatic lesions, such as those seen in the female patients with large ovarian metastatic tumors or in the male with testicular or pelvic metastases, favors the development of cardiac lesions, since the return blood supply from these tumor masses is emptied directly into the inferior vena cava rather than by passing through the portal veins and liver where inactivation of serotonin might occur. Others have suggested that large metastatic lesions in the liver favor the development of cardiac lesions, since under such circumstances there is insufficient liver tissue left to inactivate or metabolize the serotonin.

---

* See Part I in May issue of MEDICAL ANNALS, pages 252–3.

Spain,[62] in a recent critical review of autopsy material from patients having intestinal carcinoids, both metastatic and nonmetastatic, described fibrostenotic lesions of the pulmonary valve or tricuspid valve in one-third of 26 cases reviewed. The clinical histories of the patients were not given and have not been obtainable through personal communications. His findings of significant lesions in the right side of the heart, as well as other cardiovascular abnormalities, were higher than those found in the review of similar material elsewhere.[17]

In the patients listed in table 2 who have died and during life or at autopsy were found to have had malignant carcinoids, the gastrointestinal, metabolic, and cutaneous vascular features were similar to those in table 1†. None of those who had adequate autopsy examinations, however, were found to have had definite endocardial or valvular lesions of the right side of the heart, and the cardiac symptoms and abnormal findings during life were slight or absent. In 1 patient who had terminal cardiac symptoms, a severe constrictive pericarditis was found at autopsy.[58] A similar constrictive pericarditis has been found in a malignant carcinoid[17] in which no recognizable features of a functioning carcinoid were observed during life.

Several of the living patients listed in table 3 have definite clinical and hemodynamic findings of well-established pulmonary stenosis and/or tricuspid insufficiency, and others have no clinical evidence of heart disease. Five of this group have abnormal blood and urinary findings which in the present accepted interpretations indicate chemical and metabolic evidence of a functioning carcinoid.[15] A clinical diagnosis of pulmonary stenosis and tricuspid insufficiency associated with a malignant carcinoid was made clinically by me in 1 patient in this group (Sjoerdsma et al[15]—case 1) in 1953 following a similar case report by Biörck in 1952.[9] This clinical diagnosis was substantiated by Dr. Biörck, who saw the patient in September, 1954. Subsequent chemical and metabolic studies by Sjoerdsma et al[15] late in 1954 substantiated the clinical diagnosis, and they have reported a clinical abstract of this case. This patient has refused liver biopsy or exploratory laparotomy but has had an episode of intestinal obstruction from which she recovered without surgery. The primary site of the carcinoid is not known but is probably in the ileum, since the site of partial intestinal obstruction was low in the small bowel. It is of interest, however, that a large diverticulum of the duodenum has been repeatedly demonstrated in X-ray examinations of the gastrointestinal tract.

In addition to the clinical features listed in tables 1, 2, and 3, and described in detail above, other clinical features, although less frequently observed in these 38 cases, may be related to a functioning tumor. Clinical asthma or peculiar respiratory distress was noted in 8 of 38 patients. It was not a pronounced symptom in any patient, and there is difficulty in reviewing cases to differentiate bronchial asthma from cardiac dyspnea in some clinical extracts.

---

* See May issue, page 252.

† See May issue, pages 250–1.

Stridor and constricting sensations in the chest occurring with or at the termination of a paroxysm of cutaneous flushing might be more diagnostic than chronic asthma. A theoretical explanation of bronchoconstriction has been offered as the cause of these respiratory symptoms. This has some support from observed pharmacodynamic properties of serotonin.[8]

Two of the 38 patients were confined to psychiatric wards in their terminal days, and psychotic behavior and personalities have been briefly mentioned or observed in other patients. This may be coincidental, but again there are theoretical considerations as a basis for the disturbance of brain function, since an antagonist of serotonin, lysergic acid diethylamide, produces artificial psychosis.[63]

A few patients have had arthritic symptoms, and these have been considered as being related to the effects of a functioning tumor which produced generalized changes in connective tissue.[15]

Of the 17 patients listed in combined tables 2 and 3, the primary site of the carcinoid in 10 was stated to be in the ileum or the small intestine, but the site in the remaining 7 is still unknown. The fact that liver metastasis was absent in only 2 of the above 17[58, 59] and absent in only 2 of the total of 38 cases reviewed was also of interest. Although the primary lesion has not been found in the ileum or small intestine in all functioning carcinoids reported to date, it appears that in all instances in which the primary lesion was located 31 out of 38 were in the small intestine, chiefly in the ileum. Until other information has been found it is suggested that there may be some peculiarity in the carcinoids in the small intestine which makes them different from those in other locations and that this results in demonstrable clinical and biochemical evidence of a secretory or functioning tumor.

However, a case was recently reviewed at the Armed Forces Institute of Pathology[64] in which findings typical of those in cases of functioning carcinoid of the intestine were associated with a tumor which at autopsy was believed to be a malignant bronchial adenoma of the carcinoid type with widespread metastases. Clinically the patient presented cutaneous vascular phenomena similar to those observed in cases of functioning carcinoid, as well as marked diarrhea. At autopsy the heart presented changes also similar to those noted in cases of functioning carcinoid. There was fibrosis of the tricuspid valve with marked stenosis and slight thickening of the cusps of the pulmonic valve. No clearly defined stigmata of rheumatic valvulitis were observed. The tumor was considered to be morphologically compatible with a bronchial adenoma of the carcinoid type showing an adenocarcinomatous pattern in some foci. However, it was unusual for a bronchial adenoma in that there was no discrete mass grossly, but merely thickening of the main and left lower lobe bronchi for a distance of several cm. by tumor in the bronchial wall and peribronchial tissue. The widespread metastases to lymph nodes, liver, spleen, pancreas, kidney, adrenal, pituitary and lumbar vertebrae with extensive involvement in the liver were also rather unusual for malignant bronchial adenoma. However, since no tumor was found in the intestinal tract, the latter diagnosis must be considered as well as the possibility of bronchial metastasis from a missed small carcinoid of the intestine. Although the bulk of evidence is against it, the question is raised, therefore, whether or not bronchial adenomas of the so-called carcinoid type are true carcinoids and capable on occasion of functioning.

DIAGNOSIS OF FUNCTIONING CARCINOIDS

It is difficult and perhaps premature at this early phase of our clinical concept of the complex changes which result from secreting carcinoids to give a clear decisive clinical description or diagnostic criteria of a functioning carcinoid.

By chemical and laboratory test, and in the absence of any other known cause of hyperserotoninemia, it would include any case in which there exists a hyperserotoninemia or any abnormal urinary excretion of serotonin metabolite such as 5-hydroxyindoleacetic acid. Certainly, in the absence of any knowledge of other causes for such chemical abnormalities of the blood and urine we should be highly suspicious of, or make a tentative diagnosis of, a functioning carcinoid even if other symptoms or findings of a carcinoid are not evident at the time.

The clinical features now recognized as being helpful or suggestive in the diagnosis of functioning carcinoid or carcinoid-like tumors are as follows:

1. *Gastrointestinal symptoms of intermittent intestinal obstructions and recurrent abdominal pain and distress, especially in individuals over 50 years of age in whom these symptoms are not asosciated with melena and anemia.* Such symptoms may result entirely from the local effects of a primary tumor with early invasion of lymph nodes and mesentery, but on screening chemical tests they may prove to be the earliest recognizable clinical features of a functioning tumor. The obstructive symptoms may be provoked in such early tumors by hyperperistalsis induced by the local effects of increased serotonin on the bowel rather than by mechanical obstructive features of the tumor.

2. *Development of frequent loose or watery stools (diarrhea) in association with symptoms as given in (1) above.* Suspicion should be increased when obvious cause is not found for recurrent diarrheas or when examination of the stools fails to show blood, pus, or cellular elements suggesting an inflammatory process. The frequency of stools in a functioning carcinoid is probably related entirely to the increased peristalsis, carrying the contents out of the bowel before dehydration and absorption occur. Diarrheal states continuing after a carcinoid tumor has been removed from the intestinal tract should certainly be investigated for functioning carcinoid elsewhere in the tract or in distant metastatic tumor tissue not removed at surgery.

3. *Unexplained and unusual rapid weight loss, muscle wasting and weakness, especially if associated with symptoms and signs in (1) and (2) above.*

4. *Presence of unexplained paroxysmal flushing of the skin, especially if recurrent and existing over a period of time and associated with telangiectasia.* Since this is the most striking and easily visible finding as well as a frequent complaint, it might be first noticed by physicians in many diversified fields of medicine other than that of dermatology and internal medicine. A mere knowledge of the possibilities of this entity as a cause might elicit other findings of a functioning carcinoid and justify screening chemical examinations.

5. *Symptoms and signs of valve lesions of the right side of the heart (pulmonary stenosis or tricuspid stenosis and insufficiency) when these are not well recognized as congenital lesions which have existed since childhood or which are from other recognized causes.* These, in association with characteristic cutaneous vascular phenomena, make a clinical diagnosis reasonably certain. However, confusion with cyanotic right-sided congenital lesions and pulmonary diseases with polycythemia can exist and must be differentiated by appropriate evaluation. It is probable that the cardiac lesions of a functioning carcinoid develop late, and therefore other clinical features should be present. Likewise, carcinoid heart disease should be considered in the differential diagnosis of unexplained right-sided heart failure.

6. *Physical signs of unexplained hepatomegaly, nodular masses in the liver, palpable masses in the right side of the pelvis or ovarian regions which are chronic and not associated with other features of an advanced metastatic carcinoma or similar high-grade malignant disease.* When such symptoms occur with any or part of the findings above, they strongly support the diagnosis of an existing functioning carcinoid. It should be remembered that patients may live a long time with wide-

spread and voluminous metastases from either a malignant or a functioning carcinoid.

The presence of all of the above findings together in a typical form makes the diagnosis most likely, whereas any one alone may represent only a suspicious finding which warrants screening studies.

THERAPY

Prompt recognition and surgical removal of the primary tumors in their benign or early invasive state constitutes the ideal treatment. The difficulties and low evidence of clinical diagnosis of the benign tumor have been discussed and are the limiting factors in this surgical approach. Benign tumors should be excised because of their malignant potential and because even in their benign state they occasionally produce difficulty. Inasmuch as observations have shown that ileal carcinoids have the highest incidence of symptoms and a high malignant propensity, and probably constitute the primary site of all the "functioning" tumors, it is recommended that the lower ileum be carefully inspected for evidence of carcinoids during abdominal surgical procedures. If such tumors are found they should be removed as a prophylactic procedure unless existing conditions of the abdomen make such surgery inadvisable.

There appears to be as much rationale for this approach as there is for the removal of benign adenomas from other locations, such as those located in the thyroid gland. Perhaps the low observed incidence of carcinoids of the appendix is entirely due to early symptoms and appendectomy, or to prophylactic appendectomies performed during routine surgery and not to differences in malignant propensities of the ileal and appendiceal carcinoids.[21] The high incidence of associated peptic ulcers with intestinal carcinoids suggests a potential benefit in searching for carcinoids and in their surgical excision. Since 25 per cent or more of carcinoids are multiple, it is difficult to know when surgical removal is complete. When a metastatic carcinoid is recognized, surgery should include resection of the primary lesion whenever possible, together with as much of the metastatic spread as possible, including removal of liver metastases.[20, 24, 29, 65, 66] A 10-year survival after the resection of 220 Gm. of liver metastasis, and a 17-year survival after an initial entero-enterostomy to relieve obstruction of a malignant carcinoid, as reported by Wangensteen,[24] are encouraging. The tendency for fibrous tissue hyperplasia with carcinoid metastasis often results in the formation of a conglomerate abdominal or pelvic tumor mass and may result in an inoperable situation. Large ovarian and other pelvic metastatic lesions may be very important in the production of functioning tumors[33] and should be removed. Examination of frozen sections of questionable lesions should be valuable for diagnosis and proper surgical management of a carcinoid. A positive diagnosis of carcinoid warrants extensive surgery, whereas unequivocal diagnosis of a highly malignant tumor might render removal of primary and/or metastatic lesions inadvisable.[20, 66] Preoperative urinary screening tests for functioning carcinoid[31, 55] in a suspected bowel tumor or malignant lesion may be helpful in planning management. Also determination of the serotonin content of the tumor removed may give an immediate answer for or against the presence of a functioning carcinoid. Radiation in the treatment of a malignant carcinoid has not been encouraging in the few cases reported,[19, 20, 67, 68] and it is unlikely that it would be effective in the therapy of a functioning carcinoid tumor.

Current interest and investigative work[15, 69] now in progress in the search for an effective therapeutic serotonin antagonist or methods of inactivating serotonin in functioning tumors give some hope for effective medical therapy in the inoperable patient or in those for whom total surgical removal of all metastatic tumor is not feasible. So far no effective drug has been found.

Supportive therapy includes a diet rich in protein and vitamin B, especially niacin, since a niacin deficiency is thought to exist in patients with functioning carcinoid. Until more is known about tryptophan and niacin deficiencies, it might be well to manage these patients from the same dietary standpoint as those who have pellagra. I believe, from my own personal experience in managing 1 patient for 3 years, that dietary management with supplemental vitamin B administration provides improvement, both in general health as well as in the cardiac status. When edema and ascites develop, mercurial diuretics are far more valuable than digitalis and sodium restriction alone, since there is usually a venous obstructive feature from lymph node and hepatic metastases which is partly responsible for the condition.

In patients with severe pulmonary valve stenosis or tricuspid valve stenosis, valvulotomy to improve the hemodynamics should be considered if the age and general condition of the patient justify this procedure at the time such lesions are discovered. This may be important therapy when it is noted that 1 patient[9] was 19 years of age when he died with a severe pulmonary valve stenosis.

The Carcinoid Problem

The carcinoid tumor is still a "problem child" in medicine, and its "romantic days" have not ended but have only extended from the pathologic to the clinical field in a "new fling." There are many unsettled problems in histogenesis and in the histochemical features, and the pathologic and histochemical identification continues to be a controversial subject. Will further study of the "fluorescence characteristics" or mucin production of these tumors be of value? There are many questions, such as the relationship of the "carcinoid type" adenoma of the bronchus, pancreas, etc., to the usual carcinoid of the small intestine. Are they one and the same tumor? Are carcinoids of the rectum true carcinoid? Some investigators say they are not. What is the relationship of the existence of intestinal carcinoids to recurring peptic ulcers? Is it the same as that of the islet cell adenoma,[70] or are these tumors misdiagnosed duodenal carcinoids? Is the high incidence of tuberculosis and carcinoids in the same patient just a coincidence, or is there some relationship? Also, is the high incidence of other malignant conditions in the carcinoid patient[66] just a coincidental occurrence of tumors of the same age group?

Are all functioning carcinoids malignant carcinoids, or will the extensive use of screening chemical tests for abnormal serotonin show benign tumors to be capable of producing abnormal amounts of serotonin? Is the "secretory or functioning" characteristic of a tumor related to the quality of its cellular content rather than to the volume of tumor tissue present? Do all functioning tumors arise from primary lesions in the small intestine? How important is liver metastasis? Are tumors other than the histologically recognized intestinal carcinoids capable of producing hyperserotoninemia or the clinical features that accompany hyperserotoninemia, such as cutaneous vascular and cardiovascular lesions? Are the cases with histologic diagnoses of adenocarcinoma with clinical features of a functioning carcinoid reported in the literature erroneous histologic diagnoses as have been assumed by others, or is there some unrecognized feature common to adenomas and carcinoids which is the common denominator? Added to these questions are the many unsolved problems regarding the exact pathogenesis of the widespread systemic manifestations and pathologic features of the functioning tumor, such as the endocardial and valvular lesions in the heart, etc. Thus, the introduction of the new entity of the functioning carcinoid begins a new romance which may last for another century. There may be other "flings," "marriages," and changes of names before all these problems are solved, and such terms as "carcinoid heart disease," "serotonin heart disease," and "hormonal heart disease" may be a bit premature and short-lived.

Summary

The clinical features of intestinal carcinoid tumors have been reviewed. Previously considered as small benign tumors of little clinical significance, they are now generally recognized as potentially malignant tumors. They frequently demonstrate slow but widespread extension and metastasis to the abdominal cavity, producing symptoms, disability, and death. Recent observations that some carcinoids with malignant characteristics were associated with symptoms and lesions related to other systems have resulted in the recognition of clinically functioning secretory carcinoids, capable of producing clinical and biochemical features similar to the secretory pheochromocytomas of the adrenal gland or the islet cell tumors of the pancreas.

The pathophysiologic concept, clinical features, and lesions of the clinically functioning carcinoid tumor have been described. The present concept of a functioning carcinoid tumor is based on the assumption that (1) the chromaffin cells of the normal intestinal tract en masse constitute a normal functioning secretory gland, producing a substance chemically identified as 5-hydroxytryptamine or better known as serotonin, (2) the serotonin produced is liberated into the blood and/or lymph and has certain physiologic activities, and (3) carcinoid tumors have their origin in these secretory cells and, under certain conditions, produce excessive amounts of serotonin. When released into the body and not promptly inactivated, this substance, directly or indirectly through altered tryptophan metabolism, causes exaggerated physiologic activity and pathologic changes in distant organs and tissues.

In a review of clinical and pathologic features of 38 cases of functioning carcinoids as reported in the literature, the important symptoms were found to be gastrointestinal, cutaneous-vascular, cardiovascular and metabolic. The cutaneous-vascular symptom in the form of paroxysmal flushing of the skin was the most frequent extra-intestinal finding. The development of latent cardiac involvement with lesions of the pulmonic and tricuspid valves producing right-sided heart failure was the outstanding pathologic entity other than those manifestations related directly to the tumor. The outstanding metabolic disorder was that of altered tryptophan metabolism with loss of weight and the development of a protein deficiency. Important biochemical alterations consist in the presence of abnormal amounts of serotonin in the blood and the excretion of abnormal amounts of serotonin metabolites in the urine. The detection of the latter abnormality in the urine by appropriate laboratory tests constitutes the simplest and most useful laboratory screening test at the present time.

Carcinoids occur throughout the intestinal tract from the cardia of the stomach to the rectum with highest incidence in the appendix. The present review, however, suggests that the features of a functioning carcinoid tumor occur primarily in tumors arising in the small intestine, chiefly in the ileum. Thirty to 40 per cent of ileal carcinoids develop malignant features, but the exact number of these developing clinical and laboratory manifestations of a functioning tumor is not known. Considering the number of recent case reports, it is possible that clinically functioning tumors may occur in as high as 25 per cent of all malignant carcinoids of the small intestine.

Appreciation of the clinical features and the widespread use of laboratory screening tests should result in the diagnosis being made earlier and more frequently. Appropriate surgical treatment of the primary tumor and metastatic lesions may well result in the prevention of the latent cardiovascular complications.

ACKNOWLEDGMENTS: The author would like to thank the following individuals for their coöperation, advice, and assistance in the preparation of this paper: Dr. William C. Manion and Dr. Samuel H. Rosen, of the Armed Forces Institute of Pathology; Dr. Albert Sjoerdsma, of the National Heart Institute, Bethesda, Md.; Dr. Owen H. Wangensteen, Department of Surgery, University of Minnesota Medical School; and Mrs. Katheryne W. Bradley and Miss Wanda Burnett, of the Walter Reed Army Institute of Research.

(*Continued on page 355*)

HYPOTHERMIA AND HYPOTENSION FOR MAJOR PELVIC SURGICAL PROCEDURES*

SOLOMON N. ALBERT, M.D.

Chief of Anesthesiology, District of Columbia General Hospital; Clinical Instructor in Anesthesiology, George Washington University School of Medicine

JAMES G. SITES, M.D.

Instructor in Obstetrics and Gynecology, George Washington University School of Medicine

HAROLD N. ECCLESTON, JR., M.D.

Instructor in Anesthesiology, George Washington University School of Medicine

INDUCED HYPOTENSION by the controlled administration of sympatholytic drugs or by high spinal anesthesia has been popularized in recent years as an adjuvant to anesthesia in order to produce a bloodless field.[1, 2] These technics, although of great advantage to the surgeon, have been widely criticized and have in some cases resulted in grave postoperative complications.[3] Most of the complications are due to the blood flow being decreased below the critical levels to vital organs with resultant irreversible anoxic changes and vascular occlusion from the stagnation of blood.[4]

Radical hysterectomy with dissection of pelvic nodes for cancer of the cervix is an extensive procedure resulting in the loss of large amounts of blood. Therefore, we thought it would be desirable to develop a technic whereby blood loss could be reduced to a minimum and at the same time protect the vital organs against sudden changes in oxygen delivery such as those encountered with a reduced blood flow.

The cases of 5 patients undergoing radical hysterectomy with pelvic node dissection and 1 case of anterior exenteration are presented as a preliminary report. It is not our purpose to go into the merits of surgery versus irradiation but to present a different anesthetic technic under which the surgery was performed.

TECHNIC

All patients for radical pelvic surgery underwent similar preoperative examinations once a diagnosis was made. This consisted of a complete physical examination with medical consultation and treatment as indicated. An X-ray film of the chest, intravenous pyelogram, barium enema examination, cystoscopy, proctoscopy, and bowel preparation with antibiotics were included. The laboratory examinations included a complete blood count, urinalysis, and blood urea nitrogen and total serum protein determinations. The disease, the value of surgery, and possible complications were explained to each patient.

There were no special preanesthetic preparations. An operating room cardioscope was attached to each patient before the induction of anesthesia, and a thermocouple was inserted within the rectum for continuous temperature recordings on a Leeds and Northrop Speedomax G machine. All patients were induced with intravenous Pentothal, and endotracheal intubation was performed after the administration of d-Tubocurarine. Anesthesia was maintained with a mixture of 50 to 50 per cent nitrous oxide-oxygen, and the occasional administration of additional intravenous Pentothal. The patient's respirations were controlled by attaching the anesthesia machine to a Blease Pulmoflator and establishing automatic positive pressure breathing with a negative pressure phase at a rate of 16 to 20 breaths per minute and a tidal exchange of 400 to 500 c.c.

---

* From the Departments of Anesthesiology and Obstetrics and Gynecology of the District of Columbia General Hospital.

Cooling was begun immediately after the induction of anesthesia by placing the patient on 2 rubber mattresses through which ice water was circulated from a Therm-o-rite machine. The body temperature was lowered at a rate of 2 to 3°C per hour. Arfonad, 0.1 per cent solution in 5 per cent dextrose in water was administered by intravenous infusion simultaneously with the initiation of cooling. The Arfonad was administered for the purpose of maintaining a mild controllable degree of vasodilatation to facilitate the cooling and not for the purpose of reducing the blood pressure. During the initial period of Arfonad administration the blood pressure remained at normal levels or was lowered not more than 5 to 10 mm. Hg. As the patient's body temperature was reduced to the range of 32 to 30°C the blood pressure was steadily reduced and maintained in the range of 80-90/60-70 mm. Hg. Neosynephrine, 0.002 per cent solution, was administered intravenously whenever the blood pressure fell below these levels.

A radical hysterectomy and bilateral pelvic node dissection was performed in 5 of the 6 patients, and an anterior exenteration was performed in the sixth. In 2 cases a portion of the omentum was removed and sutured to the vaginal cuff. This was done in an attempt to maintain a functional vagina after removal of the upper two-thirds of the vagina.

Additional factors were present in each of the cases which made the surgery somewhat more complicated. The patient of case no. 1 was diagnosed and treated within 6 months of delivery. Case no. 2 was that of a patient who had a cesarean section because of cancer of the cervix followed by 2,500 r of X-ray therapy. Case no. 3 was that of an obese patient who had had surgery for salpingitis with subsequent pelvic adhesions. Case no. 4 was that of a patient who had had a myomectomy and complete irradiation therapy for carcinoma of the cervix. Case no. 5 concerned a patient with carcinoma of the fundus and metastasis to the vagina. Case no. 6 was that of an obese multiparous patient.

The patients' rectal temperatures were lowered to 32°, 32°, 33°, 30.5°, 29° and 33°C. Drift was minimized by the gradual elevation of the temperature of the coolant after the patient's temperature reached 33°C. No attempt was made to return the body temperature to normal by the end of the procedure, but only to reverse the cooling trend. The patients were taken to the recovery room where they were covered with blankets and given nasal oxygen. The body temperatures spontaneously returned to normal in approximately 4 to 5 hours. All patients were awake before they left the operating room. Some shivering occurred in all patients during the warming period, but there was no shivering during the cooling period. Table 1 gives some of the data concerning the 6 cases.

RESULTS

The blood loss in 4 cases was estimated between 500 to 750 c.c. and in 2 cases at 1,500 c.c. We consider these to be minimal blood losses for the procedures performed. The operative fields were exceptionally dry, a condition facilitating the identification and dissection of tissues and reducing the operative time by 1 to 2 hours from previous comparable cases.

Very light planes of anesthesia could be maintained because of the induced hypothermic state. The largest amounts of Pentothal were given for induction and intubation, and subsequent administration was not needed or was minimal.

The postoperative courses of all patients were uneventful except for laryngitis following a traumatic endotracheal intubation in 1. Clinically these patients seemed to have undergone minimal stress as compared to those operated upon under routine general anesthesia. The recovery time was shortened, and there was no postoperative distention, pulmonary complications, or renal insufficiency.

TABLE 1

Data on Cases

Case No.	I	II	III	IV	V	VI
Pentothal	1,400 mg.	650	2,000	1,250	700	900
d-Tubocurarine	18 mg.	12	27	12	21	21
Arfonad	200 mg.	150	150	100	100	90
Blood replacement	1,000 c.c.	1,000	1,000	1,000	2,000	2,000
Rectal temperature (C)	37.2–32	37.3–32	37.5–33	36.6–30.5	37–29	37.5–33
Operative time	2 hrs. 50 min.	3 hrs.	4 hrs.	3 hrs. 55 min.	5 hrs.	5 hrs.
Operation performed	Pelvic node dissection	Pelvic node dissection	Pelvic node dissection	Pelvic node dissection	Anterior exenteration	Pelvic node dissection

DISCUSSION

The rationale of using hypotension with hypothermia is 2-fold: (1) The surgeon is presented with a relatively bloodless field; and (2) the complications encountered when lowering the body temperature are reduced.[5, 6]

The use of hypotension alone results in a decreased cerebral blood flow with a widening of the A-V oxygen difference which at times reaches anoxic levels. There is no reduction in cerebral oxygen consumption.[7] Cerebral oxygen consumption can be reduced by deep anesthesia[8] or by the use of hypothermia.[9, 10] Hypothermia would seem to be the more physiologic of these 2 methods, since it probably reduces the total cellular process, whereas deep anesthesia probably interrupts isolated processes in cellular metabolism.[11]

The technics of hypothermia and hypotension[12, 13, 14] seem to complement each other, since the use of a controllable vasodilator facilitates cooling by blocking the reflex vasoconstriction due to cold and reduces the work load on the heart. Hypothermia, on the other hand, seems to protect the vital organs against hypotensive episodes. No arrhythmias were encountered in these cases.

It is postulated that the technic described would be of advantage to the surgeon in treating some of the complications that arise during surgery, such as inadvertent injury of a large vessel with the sudden loss of a great quantity of blood. With the decreased metabolic rate it would be possible to obliterate the blood flow for longer periods of time with an increased margin of safety while the repair was being accomplished.

BIBLIOGRAPHY

1. Griffiths, H. W. C., and Gillies, J.: Anaesthesia, 1948, **3**, 134.
2. Enderby, G. E. H., and Davison, M. H. A.· Proc. Roy. Soc. Med., 1951, **44**, 829.
3. Wyman, J. B., Cox, R., and Gillies, J.: Ibid., 1953, **46**, 605.
4. Finnerty, F. A., Jr., Witkin, L., and Fazekas, J. F.: J. Clin. Invest., 1954, **33**, 1227.
5. Bigelow, W. G., and others: Am. J. Physiol., 1950, **160**, 125.
6. Baily, C. P., Cookson, B. A., Downing, D. F., and Neptune, W. B.: J. Thoracic Surg., 1954, **27**, 73.
7. Fazekas, J. F., Parrish, A. E., and Kleh, J.: Effect of Arfonad on cerebral blood flow and metabolism, in preparation.
8. Fazekas, J. F.: Personal communication.
9. Albert, S. N., and Fazekas, J. F.: Cerebral hemodynamics and metabolism during induced hypothermia. Anesth. & Analg., to be published.
10. Bigelow, W. G., Mustard, W. T., and Evans, J. G.: J. Thoracic Surg., 1954, **28**, 463.
11. Hulme, N. A., and Krantz, J. C., Jr.: Anesthesiology, 1955, **16**, 627.
12. Eccleston, H. N., Coakley, C. S., Alpert, S., and Albert, S. N.: Preliminary report on combination of hypothermic and hypotensive technics. Anesth. & Analg., to be published.
13. Murphy, J. P., Albert, S. N., Swain, G. M., and Coakley, C. S.: Hypothermia as adjunct to surgery of brain. South M. J., to be published.
14. Albert, S. N., Eccleston, H. N., Spencer, W., Shibuya, J., and Albert, C. A.: Hypothermia in poor risk patient for major general surgery, in preparation.

MARKED DEFORMITIES OF FEMORA IN AN ADULT CHONDRODYSTROPHIC DWARF CORRECTED BY MULTIPLE OSTEOTOMIES*

MAURICE H. HERZMARK, M.D.
Washington

THE CORRECTION of osseous deformities in adults is always difficult and fraught with many untoward possibilities. Seldom is osteotomy undertaken to change the shape of a bone except when the deformity is so painful or disabling as to interfere with a livelihood. Chondrodystrophy is usually seen in childhood or early adolescence, and corrective measures can be undertaken at that time with fair assurance of good union and ultimate stability of joints. The case being presented is of interest because the deformities were regarded during childhood as not amenable to improvement since there was a brother with a similar condition. It was not until an automobile accident rendered painful and more unstable the already unstable and deformed knees that the patient sought relief for the pain, expecting no improvement in the deformities. Working conditions were such that his livelihood was in jeopardy, and the correction by boneplasty was undertaken with full realization by the patient of the difficulties and hazards of the procedures. That a favorable result ensued is encouraging, and the case is being reported since other surgeons had discouraged any bone surgery on account of age.

REPORT OF CASE

N. A., a white man aged 38 years, presented himself in the spring of 1953 with a complaint of pain in both knees. He gave a history of an automobile accident a few months prior which caused both knees to be severely wrenched. Despite rest and conservative treatment, the knees continued to be weak, unstable and painful, and it was increasingly more difficult for him to continue his work as a mechanic in an airplane factory. On examination it was seen that he was a chondrodystrophic dwarf with very short limbs and only 4 feet 6 inches tall (figure 1). Both femora were bowed laterally, and both knees angulated into marked genu valgum. With knees touching, the feet were 10 inches apart. The tibiae were

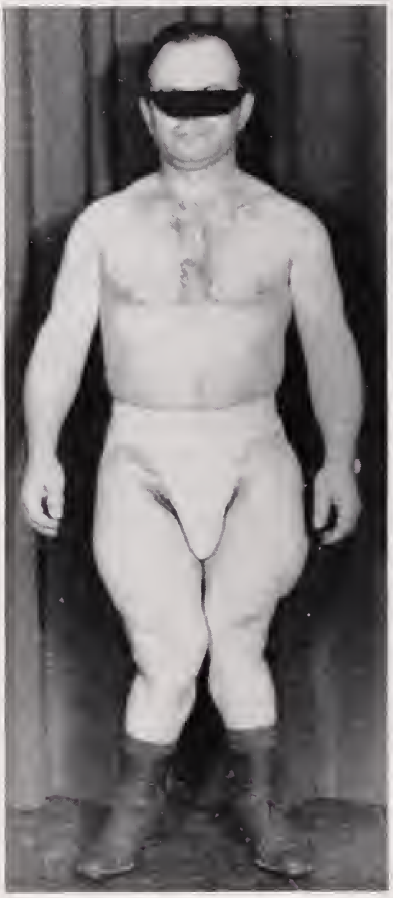


FIG. 1. Shortened limbs, bowing of both femora, and marked genu valgum.

---

* Read before the Jacobi Medical Society, November 21, 1955.

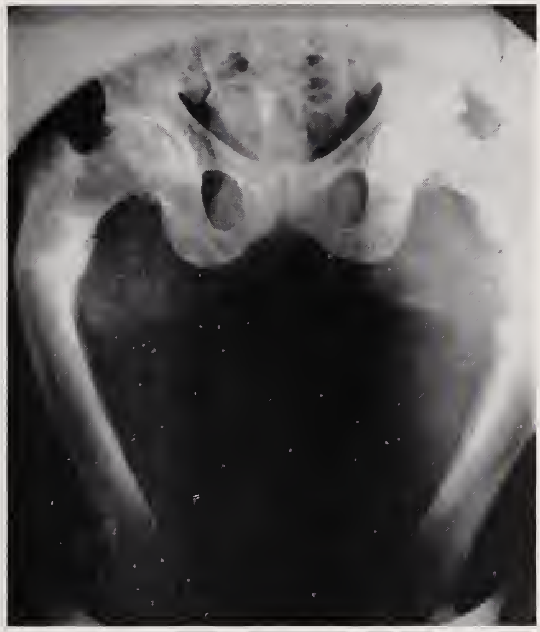


FIG. 2. Great angulation distal to the greater trochanter.

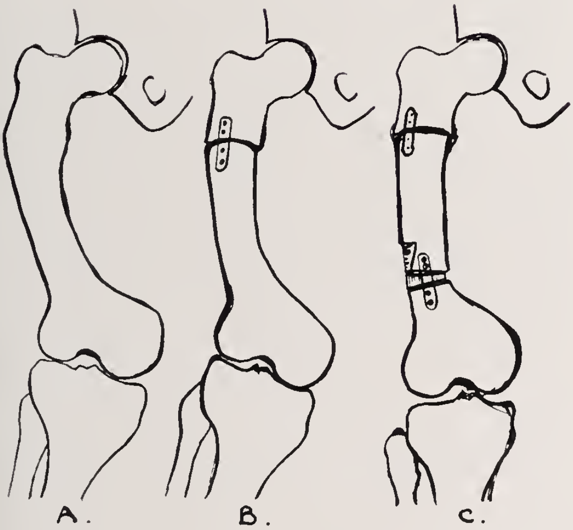


FIG. 3. Steps in the correction: (A) The angulated femur with underdeveloped lateral condyle causing articular surface to slant obliquely and explain the genu valgum. (B) Correction of angulation by curved osteotomy and bone-plate. (C) Upper osteotomy healed and osteotomy of lower end to place articulating surface in horizontal plane. Wedge taken from outer cortex and placed between fragments, supported by bone-plate.

bowed anteriorly, but the function of the ankles and feet was normal. Movement of the knees elicited complaints of pain, and besides the genu valgum there was also about 20° of recurvature. Instability of the knees in extension was very marked. X-ray examination of the femora and knees showed a marked angulation of each femur below the greater trochanter with the convexity directed laterally (figure 2). The condyles of the femora were markedly malformed with the lateral condyles much smaller than the medial ones and the joint surfaces sloping so that the lateral edges were more proximal than the medial. Otherwise the bone appeared healthy and strong. To learn, if possible, why the particular deformities had developed, I inquired into the activities of adolescence and learned that my patient had been a jockey.

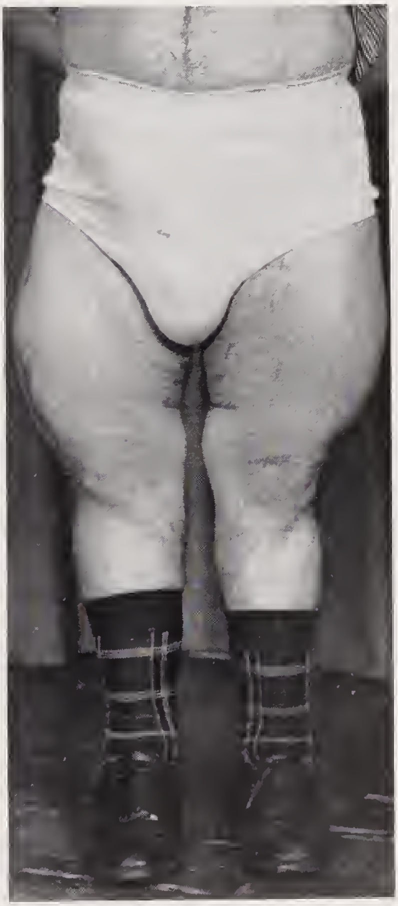


FIG. 4. End-result—knees straight and stable.

To correct the marked bowing and the genu valgum would require several osteotomies and a long period of convalescence. The patient was informed of the difficulties and hazards of the procedure at his age, but he was concerned with only one thing. He wanted relief

(Continued on page 356)

MYOMECTOMY

ROLAND BIEREN, M.D.

Gynecologist, Group Health Association, Washington

MYOMECTOMY is not employed as often as it might be. Within reasonable limits a woman who desires to retain her uterus should be able to do so. Physicians usually avoid the operation because of the marked degree of blood loss that results when incisions are made into the uterus. Such blood loss is completely avoidable by the use of special methods of hemostasis. Bonney[1] devised special clamps for this purpose. Rubin[2] and Davids[3] describe a tourniquet technic whereby a rubber tourniquet is threaded about the cervix through holes made in the broad ligaments. Bonney's clamps are available to few surgeons. A tourniquet through the broad ligament controls only the uterine vessels. Moreover, the openings in the broad ligament should be sutured after the tourniquet is withdrawn. Recently Bieren and McKelway[4] have described a technic which controls both the ovarian and the uterine vessels, does not require holes in the broad ligaments, and does not require special equipment of any kind not available in the average operating room.

Their technic consists in the use of a no. 18 elastic rubber catheter as a tourniquet about both the ovarian and uterine vessels which are compressed firmly against the cervix. The tubes and infundibulopelvic ligaments are sufficiently elastic to be encompassed in a single tourniquet loop which is passed from behind the cervix forward. First, an adequate abdominal incision must be made. The uterus, with its myomas, is delivered into the incision. If adhesions are present they should be freed. The first assistant holds the mass of tumors with the corpus and both tubes and ovaries together in his cupped hands and elevates them as much as possible through the incision. The surgeon then slips the loop of the tourniquet under the assistant's cupped hands, maneuvers it beneath his finger tips, brings the free ends forward tightly and crosses and clamps them just above the bladder. The assistant at this point may let the mass go. An incision can be made over one of the myomas. If active bleeding occurs it means that the tourniquet is not tight enough. When the tourniquet is tight enough the operation may proceed in a bloodless field. As in orthopedic surgery there is no need to loosen the tourniquet until the end of the operation.

It is important that the uterine incisions be planned carefully in order to avoid the tubal insertions and in order to remove as many myomas through a single incision as possible. All the capsular peritoneum over each tumor excised should be saved until the end of the operation, when it can be seen how much will be needed to peritonealize the incisions in the uterus. It is advisable to explore the endometrial cavity with a finger to make certain that no tumors have been overlooked. It is necessary to enter the endometrial cavity in order to remove submucous myomas. The physician who is not sure of his ability to recognize the endometrial cavity should inject 2 ml. of a 1 per cent aqueous solution of methylene blue through the cervix just prior to the operation. The endometrial cavity may be opened in 2 or 3 places if necessary. The endometrium is closed with interrupted chromic catgut sutures. The dead space left after the myomas are shelled out is obliterated with interrupted figure of eight chromic catgut sutures. The capsular peritoneum at the margin of each uterine incision is turned in by inverting, interrupted mattress sutures of the Connell type.

After all the uterine incisions are closed the tourniquet is removed. Five minutes must elapse before it can be concluded that hemostasis is complete. Usually a few areas of bright red bleeding will appear in from 1 to 3 minutes. These are secured with mattress sutures. It is impossible to check completely all oozing from the uterine suture lines. Such ooze will stop of its own accord and can be disregarded. On occasion it may be necessary to ligate the ascending branch of 1 uterine artery to check the bright red bleeding. Rarely it may be necessary to perform a hysterectomy.

If there is not sufficient capsular peritoneum to cover the incisions adequately the round ligaments may be reflected to do so. Rarely a free omental graft may be necessary to cover a raw area. If the surgeon is careful to conserve all the capsular peritoneum when making the uterine incisions, he will seldom need to resort to these procedures. Again, in peritonealizing, care must be taken not to suture too close to the tubal insertions.

Early ambulation is important, since the reported incidence of phlebitis is somewhat higher for myomectomy than for other pelvic procedures, although there was not a single instance in a personal series of 37 cases. Moderate elevation of temperature may be expected for the first 4 or 5 postoperative days, otherwise recovery should be no different than from any other pelvic operation.

The first menstrual period that occurs after multiple myomectomy may be excessive. Succeeding ones will become less so, and by the third or fourth month the menses will have returned to normal. Patients who are interested in becoming pregnant are told that they may try to conceive anytime after their third menstrual period. In such cases it is wise to establish the fact that the tubes are patent by a Rubin's test. When pregnancy occurs the patient is reassured that there need be no complication of pregnancy or labor because of the operation. In 5 patients who have conceived there have been none, and without exception labor has been short and easy. One patient has had 2 multiple myomectomies within a period of 5 years, and since the second operation she has produced 2 children after labors of less than 6 and 3 hours respectively. However, uterine rupture can and does occur through myomectomy scars.

In this series of 37 cases it was necessary only once to perform a hysterectomy after the tourniquet was removed. Two patients have developed small, recurrent myomas within a 5-year period. Two patients who have been trying to conceive, without success, have developed cervical stenosis requiring dilation under anesthesia. Of the 5 patients who have conceived a total of 8 children have been born. One patient after delivery of her only child developed what was first thought to be a recurrent myoma. Because of rapid growth the abdomen was opened again and a well encapsulated cystadenoma of an ovary removed. Pathologic examination resulted in the diagnosis of cystadenocarcinoma, and it was deemed advisable to remove the uterus and remaining ovary.

BIBLIOGRAPHY

1. Bonney, V.: Technical Minutiae of Extended Myomectomy and Ovarian Cystectomy. New York: Hoeber, 1946.
2. Rubin, I. C.: Technical principles in myomectomy with special reference to hemostasis. J. Mt. Sinai Hosp., 1951, **17**, 565.
3. Davids, A. M.: Myomectomy; surgical technic and results in series of 1,150 cases. Am. J. Obst. & Gynec., 1952, **63**, 592.
4. Bieren, R., and McKelway, W.: Use of a tourniquet in uterine surgery. Ibid., 1956, **71**, 433.

TEA

I. PHILLIPS FROHMAN, M.D.
Washington

Long before Aristotle laid the foundation for scientific thought or there was such a thing as a scientifically trained physician, tea was regarded as beneficent medicinally.

TEA-DRINKING, one of our few truly international customs, is no longer the exclusive literary property of British poets, Oriental sages, and Western novelists of the "foreign intrigue" school. Recent scientific interest in tea has considerably broadened its descriptive possibilities. Tea may be a "steaming amber liquid, delicately fragrant, gently buoyant," or it may be a "combination of tannin, caffeine, volatile oils," etc., depending on one's point of view. Both are equally acceptable, but the latter has been somewhat neglected.

The history of tea, *Thea sinensis*, like the China clipper ships of the mid-nineteenth century, presents an interesting and intriguing story. It is not the purpose of this paper to deal with the "lore" of tea and tea-drinking, but rather to discuss the use of tea in medicine.

We must be thankful to the Chinese philosopher, Chin-mung, who in 2800 B.C., so it is said, built a fire from the branches of the tea plant. Some of the leaves accidentally fell into the boiling water, and when he drank the water the exhilarating effects of this "accidental" brew led him to popularize the custom of tea-drinking. Surely any beverage able to stand the test of time since 2800 B.C. must be of some value to the human race.

In the past 57 centuries man has changed his customs, his attitudes, and his way of life and thought, but his love of tea he has retained unchanged. As early as 2737 B.C. there are written records of the ritual and ceremonial and medicinal aspects of tea-drinking. This is part of the folklore of a host of peoples.

The ability of tea to make life a little more pleasant is unquestionable. It has been stated that tea "induces a state of consciousness midway between gentle excitement and easy repose."[1]

During 1954 the people of the United States consumed 112 million pounds of tea, a per capita consumption of 0.69 pound. When we stop to consider that 1 pound of tea produces 200 cups of the beverage we can readily see that we are really a tea-drinking nation. It would be interesting to note how many pounds of tea were used for patients by the total number of hospitals in this country.

A recent symposium,[2] May 16, 1955, presented at the New York Academy of Sciences, where the author served as chairman and also presented a paper entitled "Beverage and Dietary Aspects of Tea," helped to present research and clinical data on tea that will prove helpful to dietitians, nutritionists, the medical profession in general, and those engaged in research in these fields. The topics and their discussers were: "Introduction" by S. O. Waife, M.D., Editor-in-Chief, *The American Journal of Clinical Nutrition*; "The Pharmacology of Tea" by John C. Krantz, Jr., Professor and Head of the Department of Pharmacology, University of Maryland School of Medicine; "A Medical Appraisal of Tea" by Henry J. L. Marriott, M.D., Associate Professor of Medicine and Head of the Division of Physical Diagnosis, University of Maryland School of Medicine; "Psychologic Effects of Tea-drinking" by Richard L. Jenkins, M.D., Chief, Psychiatric Research, Psychiatry and Neurology Service, Veterans Administration; and "Tea for the Relief of Fatigue, Anxiety and Tension

States" by Alfred H. Lawton, M.D., Medical Research Advisor, U. S. Air Force, Washington, D. C. All contributors helped to bring our knowledge and use of tea up to date.

Dietary Aspects of Tea

Tea appears to produce certain results which are not quite the same as those evoked by its separate constituents. Hydrogen will not quench thirst, nor will oxygen; but combined as water, they are dramatically metamorphosed. So also with tea, the beverage. Its effects are not precisely those of caffeine or tannins or vitamins or water administered separately; it is a thing in itself, and should be so regarded when prescribed by physicians. Caffeine and tea tannins react antagonistically in a well-brewed cup of tea with the happy result that many of the ill effects of both are eliminated and the desirable effects enhanced. The psychologic benefits of tea cannot be explained entirely by its chemistry either; too much is bound up in the stimulation of other senses (witness its fragrance and color), the pleasant associations it evokes, etc. Tea has a definite place in the diets of the young, the aged, and the ill. It is present in the Mayo Diet Manual and other up-to-date medical texts. "More and more it is being realized that tea can provide a gentle, yet fairly sustained boost to the convalescent patient and to the mentally depressed patient. A certain alertness without the loss of tranquillity can be attained from a cup of fresh tea, a portion of the daily vitamin requirement effortlessly tucked away, and the olfactory and gustatory senses pleasantly stimulated. As the reports from investigators continue, the list of those disorders during and after which tea appears inadvisable becomes shorter and shorter. Medicinally, tea is once more coming into its own." It is sufficient for the physician's purposes that his patient merely think that tea has changed and brightened his attitude toward life. If there is a distinction between one who is happy and one who thinks he is happy, that distinction is semantic.

Tea may be considered a nutritional but not a high-calory beverage, and is therefore excellent for the obese patient. This is especially true in summer when liquid intake increases. Since from 2½ to 4 quarts of water can be lost through normal perspiration, it is important that the obese patient know what beverages other than water itself will replace his fluid loss without adding to his weight. Tea is ideal for this purpose.

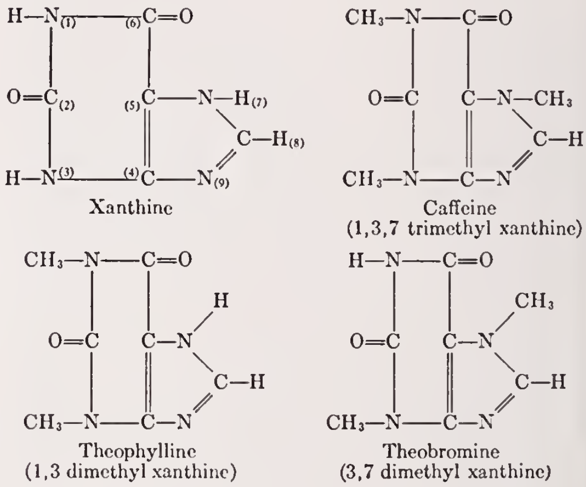
In the child's diet beverages containing caffeine are conspicuously absent. Many physicians do this automatically, often unthinkingly, and mothers follow suit. However, in the light of recent clinical discoveries,[3, 4] we physicians should think carefully before discarding tea as an adjunct in the diet of children, convalescing patients, and those with gastrointestinal upsets. Whitacre[5] studied the energy metabolism of a group of children aged 10 to 13 years over a period of 3 hours following the ingestion of medium-strength tea (caffeine content 0.03 mg.), and found the resulting metabolic stimulus to be practically the same as that following the drinking of lemonade. Needless to say, Whitacre's lemonade was made with the same amounts of sugar and lemon juice as were contained in the tea. There is no question that tea is preferred by the healthy or convalescing aged person to any other nonalcoholic beverage. The field of geriatrics should have a special interest in tea, its vitamin content, its psychic stimulus, and the production of a feeling of well-being so necessary in the aged, well or ill.

Lawton[6] dispels the notion that tea should fall on the "not recommended" list for patients with angina pectoris, myocardial infarction, bronchial asthma, gout, edema, hypertension, and most gastrointestinal disorders. He reasons thusly: "Caffeine, theophylline, and other xanthines not only relax the coronary vessels, but also appear to stimulate collateral coronary circulation. These agents, therefore, are useful to the physician as adjuncts in the treatment of both angina pectoris and myocardial infarction. The same action of these drugs to relax smooth muscle finds use in relieving bronchial asthma. Likewise, the increased blood supply to the kidneys which the xanthines bring about increases urinary output. This effect is utilized in the therapy of cardiac edema." It has been concluded that tea need not be contraindicated in the treatment of most gastrointestinal conditions.[4] The antagonistic action of tea tannins and caffeine very aptly illustrates the idea of tea as a whole. In the properly brewed cup of tea the usual disturbing effects of caffeine alone or tannins alone are simply not present. Therefore, the use of tea in restoring fluid balance in cases of vomiting and diarrhea is not contraindicated. As for gout, recent discoveries have shown that in the body xanthines do not break down to uric acid and thus may in their overabundance produce gout. On the contrary, they metabolize so that they are excreted as urea, therefore making it highly doubtful that they could have any effect on gout. An interesting paradox in the case of hypertensives is the use of xanthine drugs to dilate the vessels of the heart and kidneys and to relieve concomitant headache, yet the same physicians prescribing these drugs deny the patients the pleasure and medicinal effects of the beverage tea.

PHARMACOLOGY OF TEA

Tea is an evergreen shrub native to China and India, but it is also cultivated in Ceylon, Japan, Java, and in South Carolina. The plants *Camellia sinensis* and *Thea sinensis* are of the family Theaceae. The two largest commercial varieties of tea are green tea and black tea. This color difference is due mainly to the methods of preparation of the leaf. Due to the fermentation process in preparing black tea the enzyme thease volatilizes some of the leaf's aromatic properties and destroys a portion of the tannic acid. Therefore, black tea has a somewhat less fragrant odor and less astringent taste than green tea.

The most important constituents of tea are the mixed xanthine bases. The principal alkaloid constituent of tea is caffeine. Caffeine is trimethyl - xanthine; theophylline and theobromine are ismeric dimethyl - xanthines (figure 1). The mixed xanthine bases are the active constituents of tea, and of these trimethylxanthine (caffeine) is the stellar performer; the dimethyl - xanthines, theophylline and theobromine, play lesser roles as mild cerebral stimulants, coronary vessel dilators, and diuretics. We must keep in mind that the principal pharmacologic responses evoked by the ingestion of infused tea are due to the xanthines present, mainly caffeine. In a recent study by Martinek and Wolman[7] by request of the Chemical Laboratory of the American Medical Association, a study of the content of xanthines, tannins and sodium in coffee, tea, and cocoa was undertaken. They found that "the potential caffeine content per cup prepared from bulk black tea is comparable to that from regular ground bean coffee, although, if prepared according to the label, about 65 per cent of the leaf's caffeine is extracted. There is about three-quarters the amount of caffeine in green tea as in black tea. In general, the tannin content of tea is roughly 4 times that of coffee. The lower amounts of caffeine and tannins per cup obtained with teabags are simply the result of smaller amounts of tea used in each bag, as compared with the


Xanthine

Caffeine (1,3,7 trimethyl xanthine)

Theophylline (1,3 dimethyl xanthine)

Theobromine (3,7 dimethyl xanthine)

FIG. 1. Structure of xanthine and its compounds.

amounts recommended for use on the label of bulk teas. Analyses indicate that there is over twice as much xanthine (theobromine) present in a cup of cocoa as there is xanthine (caffeine) in coffee or tea."

A few sodium determinations were done on representative samples of several types of beverages. These authors found that there is about 0.30 to 0.35 mEq. of sodium per cup of coffee and about one-half that amount in tea.

VITAMIN CONTENT

Occasionally forgotten is the fact that caffeine is not the only physiologically effective substance found in tea. Also present are volatile oils, certain trace elements and B vitamins, proteins, chlorophyll, and water solubles of tannin, sometimes erroneously called tannic acid. Clinical investigation has shown that tea contains appreciable amounts of riboflavin (vitamin B_2) and pantothenic acid. An ordinary cup of black tea contains about 25 micrograms of riboflavin and 75 micrograms of pantothenic acid. Harrison[8] has summarized the vitamin content of tea. Fresh green tea leaf is very rich in vitamin C, almost comparable with fresh lemon juice. Five cups of tea contain nearly a milligram of nicotinic acid and about ¼ milligram of pantothenic acid. Five cups of tea will provide about 5 per cent of the daily requirement of these very important vitamins of the B group.

In the excellent scientific inquiry of Halpenny and MacDermot,[9] wherein the separate effects of tea, coffee, caffeine and tannin in terms of (a) clinical effects, (b) results of gastric analyses, (c) effects on peptic activity in vitro, (d) metabolic rate changes, (e) gastroscopic observations, and (f) barium meal examinations were studied, these conclusions were established:

"Good tea, brewed for 5 minutes, produces mild and pleasant stimulation, in no sense corresponding with the violent, unpleasant action of its main components, caffeine and tannin, when these are given separately or in combination.

"Strong tea, brewed 10 minutes, may produce some mild discomfort, but the addition of milk nullifies this.

"Cheap tea, weak, may suit some palates, has no objective effects, but in strong infusion is apt to be unpleasant.

"The effects of tea on gastric acidity and peptic activity are slight and variable. Tea does not increase acidity.

"Tea does not seem to alter the basal metabolic rate."

In view of the Halpenny-MacDermot study[9] and others which only serve to reinforce its conclusions, an exhaustive examination of the pharmacologic actions and effects of caffeine and tannins as discrete substances would not be relevant in this review. Here, we are interested in the separate constituents of tea only if they are responsible for separate results. Here we are interested in tea as tea, not as caffeine or tannins individually.

Mitchell and Bernard[10] state that the lack of riboflavin in the diet is evidenced by poor growth in the young and digestive depression and lowered vitality at any age. Susceptibility to infection and premature aging also result from a shortage of riboflavin in the diet. These authors point out that the amount of riboflavin recommended by the Food and Nutrition Board is 1.5 mg. for women and 1.8 mg. for men irrespective of activity. Riboflavin is thought to provide the maximum extension of that period, lying between full adult capacity and the encroachment of old age, the period we call the "prime of life." If 2 or 3 daily cups of delicately brewed tea, with its riboflavin content uncontaminated by weight-producing calories, can help to prolong this period, its inclusion in most diets for the aged certainly does not appear to be contraindicated.

TEA IN FATIGUE, ANXIETY AND TENSION STATES

It has been aptly stated by Lawton[2] that fatigue is produced by either or both physiologic or psychologic factors, that of hard work or muscular endeavor and that of a trying environment. He has found that tea "as a representative of the xanthine beverages is as good an agent for the relief of fatigue as has yet been offered." He has found that "the capacity for muscles to perform work is increased by the cup of tea and this is a factor in explaining the relief of physical fatigue. The main effect of the tea in alleviating fatigue is due to the stimulation of the nervous system."

Effects of Tea on Gastric Secretions and Motility

In a study of the "Effect of Tea on Gastric Secretions and Motility,"[4] the authors were anxious to learn the effect of tea taken in average amounts and as it is customarily prepared for the average tea-drinker. They prepared tea according to the directions on the label of commercially available tea-bags, that is, by steeping 1 bag (average tea content, 2.3 Gm.) per cup (150 c.c.) of boiling water for 3 minutes. By chemical analysis this was shown to yield 0.03 to 0.032 Gm. per 100 c.c. of crude caffeine, or approximately 45 mg. (0.75 grain) per cup. The first phase of their work dealt with the effect of tea on the pH and pepsin of gastric secretion and on gastric motility. Additional work is in progress dealing with biliary and pancreatic secretion and the comparative effects of tea with caffeine and decaffeinated tea. Over 300 intubation studies were performed in 114 persons during an 18-month period. Each of the patients studied was diagnosed as having either inactive duodenal ulcer or functional gastrointestinal disorder. To serve as a control, the comparative effect of tea to that of water was studied under identical conditions. Each test was repeated on the same patient on a different day, with water substituted for tea.

After an excellent and exhaustive study the conclusions of Wirts et al were as follows: "1. Tea appears to increase the rate of gastric emptying when compared to the effect of an equal amount of water, when used with a 40 per cent protein, carbohydrate, fat or combined (eggnog) meal. 2. The iced beverages used have a more pronounced effect in this regard than hot. 3. Tea appears to stimulate gastric motility. This is apparent from the investigation of the amount of gastric residue remaining after various meals with tea and water, both by tube and fluoroscopy as well as by the use of intragastric balloon with the beverages alone. 4. Tea, when compared to the effect of an equal amount of water, exerts approximately the same effect on the gastric secretory output (volume, pH, free acid, and pepsin). 5. These data suggest that the use of tea, taken as a beverage in average amounts, need not be contraindicated in the treatment of most gastrointestinal conditions."

If tea is regarded not just as dried leaf in solution, but instead is viewed, undivorced from its psychologic and social ramifications, it offers an almost limitless field for investigation. The psychologist, anthropologist, and historian can perhaps contribute even more than the physical scientist, for tea is more symbol than stimulant, more power of suggestion than digestion.

Aside from water, tea is the world's most popular beverage. One can see why this is true by assessing some of the evidence available in the literature, as I have done here—or, and this is perhaps the better way, one can sit back, relax, and enjoy a cup of tea.

2924 Nichols Avenue, S. E.
Washington 20, D. C.

BIBLIOGRAPHY

1. Ukers, W. H.: All About Tea. New York: Kingsport Press, 1935.
2. Waife, S. O., Krantz, J. C., Jr., Marriott, H. J. L., Jenkins, R. L., Lawtcn, A. H., and Frohman, I. P.: Tea—A Symposium on the Pharmacology and the Physiologic and Psychologic Effects of Tea, May 16, 1955. Washington, D. C.: Biological Sciences Foundation, 1955.
3. Bull. Biol. Sciences Foundation, Washington, D. C., December, 1954.
4. Wirts, C. W., Rehfuss, M. E., Snape, W. J., and Swenson, P. C.: Effect of tea on gastric secretions and motility. J.A.M.A., 1954, **155**, 725.
5. Whitacre, J.: Effect of tea on energy metabolism of children. J. Home Economics, 1942, **34**, 187.

(*Continued on page 356*)

President's Page

HONOR THE LIVING

Times have changed, but unfortunately not always for the better. Minutes of the Society bear eloquent testimony to this fact. For example, down through the years and as late as the mid-1930's, the primary emphasis was on the scientific program. Nonscientific activities of the organization, the record shows, were frequently concerned with the recognition of the accomplishments of Society members. What may now seem windy, artificial, and overly sentimental tributes were paid to members both living and dead. Admittedly, this period seems far away in the day when brevity is the watchword and sentimentality has too frequently given way to impersonal efficiency.

Now I agree that our predecessors were sometimes extravagant in the praise they bestowed on their fellows. However, I do not agree that sentimentality has no place in our organization. On the contrary, my feeling is that we should pay tribute where tribute is due—that it best be done when the individual is living.

I was much pleased that the Executive Board concurred in the suggestion that living Past Presidents be honored by the Society on President's Night. As those who were present on that occasion know, framed certificates were presented to each Past President in recognition of his service while in office.

In recent years, Certificates of Meritorious Service have been presented annually to members of the Society who have distinguished themselves not only in the medical field but in community affairs. It would seem now that the precedent established in conferring these awards will become a permanent part of the Society's program.

Then, there is the John Benjamin Nichols Award, bestowed on lay persons or organizations that have made outstanding contributions to the betterment of health in the community. Dr. Nichols, in addition to being one of Washington's most distinguished physicians, was long a leader in Medical Society affairs. For reasons now obscure, Dr. Nichols suddenly became inactive and was all but forgotten by the organization which he had served so faithfully. However, there were those who remembered, and in 1943 he was awarded the Certificate for Meritorious Service.

But more honors were in store for Dr. Nichols. The Society's Committee on Public Information in 1953 voted that an award which it proposed be presented to laymen and lay organizations be named for him. Friends can testify to the great lift this recognition gave him during the remainder of his life.

Who would deny the propriety and the honest sentiment which prompted the recognition of the recipients of these awards?

Let it be understood that your President is no protagonist of maudlin sentimentality, but he believes that there is a middle road which our organization should follow. It is this which strengthens bonds of loyalty to our organization and creates good will and understanding among its members.

W. Ross Morris

Editorials

A LETTER TO COMMISSIONER DAVID B. KARRICK CONCERNING OUR HOSPITALS

Dear Mr. Commissioner:

We welcome you as our new "Commissioner of Health." Our relations with your predecessor in the past, Commissioner McLaughlin, were excellent, and we have no doubt they will remain so with you. Mr. McLaughlin listened attentively to us and in so far as possible made use of our suggestions. We should like to begin by telling you our views concerning our hospitals.

Our Washington hospitals, both voluntary and governmental, are sick—sick in a number of ways. This is our appraisal of a few of the more serious complaints that are curable, with suggestions for the remedies.

Three years ago, upon the recommendation of Congress, an extensive report was presented to the Commissioners of the District of Columbia of a Survey of Medical Care for the Indigent and Related Services compiled after a year of intensive study by a large group of professional people, including members of the U. S. Public Health Service loaned as surveyors. Some of the numerous recommendations have been carried out, but many have not. It was concluded by the survey group that the weaknesses and deficiencies stemmed largely from two things: (1) a lack of community planning and coördination of medical resources, and (2) inadequate financial support. These two basic shortcomings still exist in large measure.

To begin with, we wish to point out that the Government of the District of Columbia (which means the Board of Commissioners and the District Committees of the Senate and the House of Representatives) should have as much interest, if not more, in the voluntary hospitals, which in the broadest sense are public institutions not for profit, as in the institutions and agencies operated by the Government of the District of Columbia. The Government should be vitally concerned with the health of all the people and has an obligation to give private enterprise support in running the voluntary health units. Patients in our voluntary hospitals far outnumber those in our Government institutions, excluding St. Elizabeths Hospital. They not only pay their way as patients, but they support our medical training programs, pay for the care of indigent patients through taxes, and make it possible for the United Community Services to do a good job by their contributions.

Two problems of different nature can be settled by a single means. These are (1) that the standard of medical care in the District of Columbia General Hospital has deteriorated because of overcrowding of patients as well as for other reasons, and (2) that the voluntary hospitals have suffered a lowering of the quality of care of the patients treated in them because of an inadequacy in numbers of interns and residents on their staffs. The lack of interns and residents stems not only from a short national supply, but also from inadequate graduate training programs in our hospitals, the main cause of which is lack of teaching material, which means patients treated by the resident staff under supervision of an instructive visiting staff. Hospitals cannot attract interns and residents, who are really graduate students, unless they offer good training programs. Now, if a portion of the patients in the overcrowded District of Columbia General Hospital could be treated in the 8 contract hospitals of the District, a great deal could be accomplished in the development of their training programs. By contract hospitals is meant those which contract with the District of Columbia Health Department to take care of indigent patients in their outpatient departments and emergency cases in their wards. These hospitals can accommodate a much larger number of indigent patients in their wards than the few patients they treat for emergency conditions.

A regulation established by the Board of Commissioners in 1949, to the effect that only indigent patients with emergency conditions could be admitted to the contract hospitals at Government expense, was discarded by Commissioner McLaughlin's efforts, so that now indigent patients with non-emergency conditions may be admitted to these hospitals as well as to the District of Columbia General Hospital but in very limited numbers. These numbers are far inadequate to provide satisfactory "house services."

In further elucidation of this matter, we quote from the Mile Posts to Health, which is a summary of the District of Columbia Survey of Medical Care for the Indigent and Related Services. These excerpts come from the reports of three different committees.

From the Committee on General Medical Care:

"A serious defect is lack of integration of the various services for the individual patient. Regionalization of medical care is both desirable and possible. Another matter of philosophy is the concept that so far as possible indigent patients should not be treated in different institutions nor by other professional personnel than are pay patients. This means that maximum use should be made of the contract hospitals and their staffs. . . .

"The patient who has received outpatient care at a voluntary hospital is virtually restricted to District of Columbia General Hospital for inpatient care in other than emergency hospitalization. This separation makes for duplication, prevents continuity of care, and works a hardship on the patient. . . .

"The quality and quantity of medical care for the needy should not be inferior to that available to others in the community. Adequate medical care of good quality requires continuity of service. Effective and efficient service requires an integrated source, where the same facilities and personnel, insofar as is feasible, are used to provide care. . . .

"The plan should assure continuity and adequate quality of care to the patient, should share in meeting the needs of the community for education of professional students and graduates, and should make the most effective use of personnel, facilities, and funds. . . .

"Insofar as possible, an individual should be able to obtain all the services at any one of the hospitals participating in the plan. Since the concentration of medical care for the indigent at the municipal hospital symbolizes the undesirable philosophy of separate care for the needy, the number of hospitals participating in the plan should be as large as is possible. Each participating hospital should be prepared to offer a comprehensive service to the individuals accepted for care. In particular, the hospitals must plan to make available sufficient beds to furnish inpatient care when needed by the patients attending the outpatient clinic. Within each of these hospitals the administration should be planned to assure continuity of care by the development of unit record systems, procedures for referral and exchange of information, and a method of adequate follow-up for each individual patient.

"Referral of individuals should take into consideration the proximity of residence to the hospital, the preferences of the patient, and the ability of the hospital to furnish care. . . .

"The rates of payment to the coöperating hospitals should be raised to a level more consistent with the costs to the hospital, based on uniform cost accounting procedures. The increases should apply to all services furnished by the hospitals—hospitalization, clinic visits, emergency ambulance calls, X-ray service, and any other services, such as home care, which may be agreed upon in a plan for medical care of the indigent. . . ."

From the Committee on Hospitals and Clinics:

"Hospitals are the places where newly graduated physicians, nurses, medical and technical students, and physicians preparing for specialties secure training. The best training involves the presence in the hospital of patients who cannot afford private physicians and whose care is supervised by the attending and resident staffs. Under the present contracts of the Health Department with the voluntary hospitals, carrying out a ruling of the Commissioners of the District of Columbia, no patients can be hospitalized at District expense unless they are emergency cases. This situation greatly restricts the training program in the voluntary hospitals, since it almost eliminates indigent patients from the wards of these institutions. Indigent patients should be treated like patients who can pay their way and should not be stigmatized by putting them in a separate category. Consequently, voluntary hospitals which can provide the

> proper quality of care to indigent patients should be utilized to the fullest extent possible for the care of such patients. Theoretically at least, municipal hospitals exist largely to supplement voluntary hospitals in this regard and to provide facilities and care for patients with such conditions as tuberculosis and mental diseases and indigent patients with chronic illnesses."

From the Committee on Public Health Organization and Administration:

> "A coördinated plan for medical care of the indigent is required to assure continuity and high quality of care for the patient, to meet the needs of the District for training of professional students and graduates, and to make the most effective use of facilities, funds and personnel. The plan should be comprehensive enough to include preventive services, hospitalization, ambulatory care, home care, nursing home care, and rehabilitation, and should safeguard for the patient the right of free choice of hospital or clinic within the group of institutions coöperating with the Health Department in providing medical care for the indigent. The policy of concentrating indigent patients at D. C. General Hospital should be abandoned."

Of course, the remedy suggested for these two illnesses—overcrowding at District of Columbia General Hospital and inadequate material for training programs in the voluntary contract hospitals—means that funds be provided to pay for the extra load in the voluntary hospitals. Some of the expense will be saved by the lessening of the load at the D. C. General Hospital and some by greater efficiency and lack of duplication in caring for the patients diverted to the contract hospitals. Furthermore, the contract hospitals must be adequately remunerated, that is, paid what it costs them to care for these patients. It is quite possible, therefore, that Congress must appropriate more funds to take care of this problem.

It must be emphasized that what is wanted is solely for the purpose of providing better medical care for the sick, whether they be pay patients or indigent patients.

In another letter we should like to discuss the subject of community planning of health services.

Sincerely yours,

Physicians of the District of Columbia

OPERATING ROOM SPACE IN THE HOSPITAL

The financing of hospitals continues to be the most persistent and pressing of the problems which beset these institutions. No longer is it generally attempted to charge full-paying patients enough extra to make up the deficit created by those who pay only partially or not at all. The rising costs of hospital care have forced the realization that this system not only was unfair but that it had become unworkable. It has become widely accepted that all patients should be charged at a rate which bears a reasonably close relationship to true over-all costs, whether the origin of payment is personal funds, prepaid health insurance, or a community agency.

However, despite the varied and ingenious means which have been devised to meet them, rising hospital costs by their very magnitude demand constant inspection to see whether these large amounts of money are being used most wisely and efficiently. Assignment of hospital floor space should be carefully related to its productive utilization. This is especially important in the operating rooms because of the unusual cost of maintaining such space in operation and also because of the exceptional opportunity to make each square foot of it productive.

In a very real sense any hospital area which does not pay for its maintenance must be subsidized by overcharging for a space which does. In point of principle this is almost as bad as for a paying patient to have to subsidize one who cannot pay in full.

An operating room more readily supports itself when it is used for at least the major portion of the working day. In the hospital field we may come to see an elaborate, expensively equipped room operated through two shifts daily in order to distribute among more patients the large basic costs of upkeep. Awareness of these facts should prevent any hospital from deliberately constructing an excessive number of spaces to remain partially idle. Also to be avoided is the tendency to unreasonable specialization in room set-up so that its functions are too limited, because this leads to marked daily fluctuation in the use of such rooms. The biologic specialization of the dinosaurs which led to their evolutionary destruction is a historical fact of significance to this argument.

If it is agreed that operating rooms should be of a proper number and sufficiently nonspecialized for relatively constant service, it should be even more obvious that close grouping of rooms is essential for the efficient use of trained personnel. In this latter connection it should be remembered that today personnel costs amount to as much as two-thirds of hospital operating expenses. The best use of personnel involves not only correct distribution in the institution but requires as well that each person be used in accordance with his capabilities. One operating-room supervisor may well use middle grade help and care adequately for a half dozen carefully arranged rooms. On the other hand, if these rooms are widely separated and even on different floor levels, each one might need its own supervisor and because of isolation in emergencies still be inadequately staffed. This point is particularly applicable to personnel of the anesthesia department whose use must be carefully distributed as a necessary group in short supply. The availability of extra help for emergencies in this field too is directly related to patient safety, and this argues strongly against dispersal of operating-room facilities.

Since almost the only arguments against close, efficient grouping of just enough general type operating rooms to provide both efficient and economical service are professional and specialty arguments, it becomes a matter of significant responsibility of the medical staff to justify those expenses which are added in violation of the principles supported here. The public interest demands that every dollar spent in the hospital offer a suitable return. The proper planning of operating-room space in the new buildings in all communities is one point at which the medical profession can effectively trim non-essential cost.

D. S.

GHI AS SEEN BY ITS DIRECTOR

If Americans possess one characteristic that sets them apart, it is their ability to turn the hard facts of adversity to their advantage. No one who experienced the problems that accompanied the depression is likely to forget them or to yearn for a return of those unhappy days, which were distinguished mainly for the social and economic ills that beset the country. And yet, in retrospection, despite the welter of confused and wasteful experimentation that followed, we can thank the depression for having increased our wisdom and for other blessings of a more tangible nature.

One of these is the fact that during the depression years the problem of making it economically easy for people to go to the hospital was brought clearly into focus. In Washington, as elsewhere, a high percentage of hospital beds were unoccupied. Hospital collections were poor and, with few exceptions, hospitals were running in the red. At the same time, almost within a stone's throw of their doors were thousands of people who needed and wanted hospital care they could not afford.

These conditions were a cause for concern among thoughtful citizens, among them the Honorable Joseph H. Himes, then President of Columbia Hospital. Was there a solution? Determined to leave no stone unturned in an effort to find one, Mr. Himes called a public meeting of community leaders to discuss the problem and to determine what could be done. The meeting, which was held on March 10, 1933, was fruitful, resulting in the appointment of a committee that laid the groundwork for Group Hospitalization, Inc.

It is of interest to note that Mr. Himes, without regard for the demands of his widespread business and personal interests and with his characteristic vigor and determination, applied himself to the initial planning and preparations for establishing the Plan. A short time later he was to become President of Group Hospitalization, Inc., a capacity in which he has since served continuously. He probably has had more years of active service in the prepayment movement than the president of any other Plan. The community is indebted to him, as well as to the other devoted men and women who through the years have served as members of the Board of Trustees. It is largely the result of their vision and sound guidance that Group Hospitalization has attained its present stature.

The 1933 meeting marked the beginning of a new era in hospitalization for the Washington area. A little more than a year later, on March 15, 1934, Group Hospitalization's first office was opened, and the following July 1 protection became available to the first handful of subscribers.

Only those who were actively identified with the preparations for establishing the Plan can appreciate the magnitude of the problems that were involved. The sponsors of the Plan were pioneering in hitherto unexplored fields without benefit of dependable actuarial data. Procedures for group enrollment had to be evolved. The coöperation of physicians, hospitals and employers had to be obtained. It was necessary to devise forms and systems for record-keeping. Almost daily new problems were encountered.

Fortunately for Mr. Himes and the Committee, among those actively interested in the movement from its beginning was Mr. E. J. Henryson, then serving as the executive of the Health Committee of the Council of Social Agencies. Mr. Henryson, as Secretary of the Group Hospitalization Committee named at the public meeting in 1933, was responsible for planning much of the detailed structure of the new organization, of which, on February 1, 1934, he was named Director. It was my privilege, during those early days of preparation, in response to an invitation from Mr. Henryson, to collaborate in developing many of the business forms and the bookkeeping system which the Plan later adopted. Less than a year later, when Mr. Henryson needed assistance in handling the volume of work, I was to become associated with the Plan in a permanent capacity. Mr. Henryson continued to serve as Group Hospitalization's Director until December 31, 1948 when, for reasons of health, he retired. He is recognized nationally for the contributions he made to the prepayment movement.

During those first few years, although the way was rugged, Group Hospitalization enjoyed a slow but steady progress despite the predictions of skeptics who said it couldn't be done. Nearly a quarter of a century later, the name of Group Hospitalization and protection against the expense of hospital care are to many people in this area synonymous. This is understandable when it is remembered that Group Hospitalization is providing protection to more than 650,000 persons; that since the Plan began operations, it has paid more than $56,000,000 for subscriber benefits; that such payments this year alone will approximate $10,000,000 and that, in the operation of this extensive program, only about 7½ cents of the subscription dollar is currently being used for overhead.

From the beginning Group Hospitalization has adhered closely to its original objectives, which were (1) to provide the greatest protection to the largest possible number of people at the lowest cost consistent with a sound operation, and (2) to provide them with protection in the areas of their greatest need first, and later to expand the program to provide protection against the major expense incurred because of prolonged or unusually costly disabilities.

Realization of these broad objectives calls for a highly flexible program that can readily be adapted to meet changing conditions. The officers and trustees have not hesitated to make adjustments that have been necessary from time to time to safeguard the best interests of the subscribers. At the beginning of operations, enrollment was available only to employees of organizations in which groups of subscribers could be formed. About 4 years later (December 1937) enrollment was opened to the dependents of subscribers. In 1950, enrollment on a non-group basis was made available to persons who are not eligible to apply through a common employer group.

The protection of the Preferred Hospital Service Contract, which offers coverage for up to 6 months each hospital confinement, was made available on January 1, 1955. It has met with a cordial reception. Just last March the benefits provided by the Standard Hospital Service Contract were increased substantially at no additional charge to the subscribers. It is worthy of note that during the more than 22 years Group Hospitalization has been in operation, subscription charges have been increased only 3 times, the last increase being in 1952. Within the last year or two there has been a demand for protection against major medical expense. Such a program has been developed and will be available in the near future on a group enrollment basis.

Hospitals, too, have benefited from the success of Group Hospitalization. There are fewer empty beds. Hospitals are able to foretell fairly accurately the number of Group Hospitalization subscribers who will be admitted and for whom they will receive prompt payment from the Plan. To that extent hospital incomes have been stabilized and their collection problems reduced.

Group Hospitalization early demonstrated to the public that the principle of prepayment is sound and, in doing so, indirectly rendered a valuable service to the medical profession. This has been reflected by the amazing growth of Medical Service of the District of Columbia, which is administered by Group Hospitalization as agent. The protection of that Plan was made available in 1948, and in less than 8 years its enrollment exceeded the half-million mark.

Through the years Group Hospitalization has received excellent coöperation from its participating hospitals and from the medical profession. For this we are grateful, and we hope we shall continue to merit their confidence and support in the service to which we are dedicated.

F. P. Rawlings, Jr.
Director, Group Hospitalization, Inc.

MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, April 23, 1956, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

William E. Reefe, 1835 Eye Street, N.W.
Harold Martin Silver, 2300 K Street, N.W.
Frank M. Trozzo, Jr., 4606 Sargent Road, N.E.

Associate Members

Helen D. Capone, 4376 N. Pershing Drive, Arlington, Va.
Stewart T. Ginsberg, Psychiatry Division, Veterans Administration
Lawrence S. Lilienfield, Georgetown University Hospital
Robert D. Neubecker, Armed Forces Institute of Pathology
Douglas W. Terry, 5322 Manning Place, N.W.
Frans Peter Donatus Timmermans, 3600 Connecticut Avenue, N.W.
John C. Watson, 808 Prince Street, Alexandria, Va.
Edward S. Witowski, Jr., 8218 Wisconsin Avenue, Bethesda, Md.

Resident-Intern Member

Joseph E. Bartkowski, Georgetown University Hospital

PROCEEDINGS OF THE ANNUAL BUSINESS MEETING

Dr. W. Ross Morris, President of the Medical Society of the District of Columbia, presided at the Society's Annual Business Meeting, May 2. A copy of "Annual Reports of Officers, the Executive Board and the Board of Censors for 1955–1956" had been mailed to each voting member of the Society prior to the meeting and was approved without reading. Also approved was the "Supplementary Report of the Executive Board," which is published in this issue following the proceedings, and which was presented to the Society by the Chairman of the Executive Board, Dr. Wallace M. Yater.

Dr. Morris reported the deaths of 26 members during the past year, and those present stood for a moment in silent tribute to the deceased. The deceased members were: Drs. Truman Abbe, May D. Baker, Radford Brown, James D. Carter, Claude Caylor, Matthew E. Donahue, Aubrey O. Hampton, Elliott Hunt, Emil J. C. Hildenbrand, Charles W. Hyde, Laurence M. Hynson, Benjamin L. Jamison, Lee Jarvis, Charles H. Kelley, Carl S. Keyser, Robert Scott Lamb, Bolivar J. Lloyd, James Alexander Lyon, John A. Nelson, Daniel D. V. Stuart, Eugene A. Taylor, William D. Tewksbury, John H. Trinder, R. Thomas West, Harold A. Wood, and James C. Wynkoop.

Annual Report of the Chairman of the Executive Board

Chairman Yater gave a brief summary of the principal activities and actions of the Executive Board over the past year. Not included in the report were routine matters, which occupy a great deal of the Board's time. In this category are supervision of the Society's finances, disposition of membership problems, and decisions with respect to administrative procedures.

Some of the more important actions taken by the Board are enumerated below. A great many of them were initiated by the various committees of the Society.

Following discussion of resident-intern salaries in the District of Columbia and citizenship status of many residents and interns, the Board voted to present to the Society Amendment XXVII, which deletes the salary specification and the citizenship requirement for residents and interns who apply for membership in the Society.

Endorsed the resolution adopted by the Health Section, United Community Services, that the Board of Commissioners of the District of Columbia be requested to consider the present practices pertaining to the hospitalization of the medically indigent and to make appropriate changes or modifications in their regulations so as to provide for non-emergency hospital care in voluntary hospitals and adequate reimbursement for such care.

Approved the recommendation of the Program Committee that the programs for the year 1955–56 be limited to the Annual Scientific Assembly, the Midwinter Seminar, and the March and May business meetings, unless otherwise recommended by the Program Committee. The Society accepted the invitation of Dr. Winfred Overholser, Superintendent of St. Elizabeths, to hold one of its meetings at St. Elizabeths, which was done on November 9, 1955. It also approved a joint meeting of the Washington Academy of Sciences and the Society, which was held, November 17, 1955 at the Armed Forces Institute of Pathology.

Rejected the resolution submitted by the Section on Radiology relating to the corporate practice of medicine, and to a liaison committee of physicians to deal with fees and allied professional matters relating to the participation of physicians in Medical Service.

Voted to endorse in principle the plan submitted by Medical Service of the District of Columbia to broaden benefits offered by the Service to subscribers to include medical care. Concurred with the request of the Service to appoint a committee of internists to advise that organization with respect to its contemplated expansion program.

Endorsed recommendations of the Committee on Public Health providing for better registration of births and changes in the certificates for recording live and still births in the District of Columbia.

Authorized financial support in the sum of $500 for the National Health Fair, contemplated to be held in 1957.

Endorsed the professional liability insurance policy offered by the St. Paul Mercury and Indemnity Company and approved the proposed agreement between the Society and the St. Paul Company.

Authorized subsidization of the Doctors Symphony Orchestra in the amount of $500.

Approved the Narcotic Report Form developed by the Committee on Public Policy, to conform with the District of Columbia code, which will assist the physician in keeping proper records of the narcotics which he dispenses and administers in his private practice.

Voted that changes be made in the conduct of the Davidson Lecture: (1) In the future the Davidson Lecture Committee should include representatives of each of the medical schools, Government institutions in the medical field, teaching hospitals, etc., and (2) rules governing the Lecture should be amended to provide that studies made in the Metropolitan Area outside the District of Columbia be eligible for contest.

Approved the request of the Section on Pathology and Laboratory Medicine that changes proposed in the definition of the practice of pathology and laboratory medicine be brought to the attention of the Society and local hospitals.

Voted to recommend the adoption of Amendment XXVIII, which provides that a list of applicants for membership be submitted periodically to the membership in writing instead of orally, as heretofore.

Voted approval of S.182 and H.R. 61, companion bills requiring premarital examinations in the District of Columbia, in accordance with the recommendations of the Committee on Public Health and the Subcommittee on Venereal Diseases.

Approved the recommendations of the Committee on Vocational Rehabilitation that it be renamed "Council on Rehabilitation of the Medical Society of the District of Columbia" and that the Council affiliate itself with other organizations having to do with total restoration of the handicapped. Also that the Council be authorized to draft a blueprint for a pilot vocational rehabilitation program for the Washington Metropolitan Area, and that funds be requested through the Office of Vocational Rehabilitation of the Department of Health, Education and Welfare to implement such a program. At a later meeting the Board approved broadening the membership of the Council to include representatives of the ancillary medical services.

Voted to recommend the adoption of Amendment XXIX to the Constitution and By-laws, which would add a new section to Article 8 of Chapter 8 providing for membership rotation on the Grievance Committee.

Endorsed the establishment of a Standing Committee to be known as the Committee on Medical Ethics and Professional Conduct, and submitted to the Society Amendment XXX, which authorizes such a committee, specifies its responsibilities, and provides for membership rotation.

Requested the Chairman of the Executive Board to inform the Board of Trustees of the American Medical Association that the Board was in sympathy with the AMA's stand on proposed amendments to the Social Security Act but that it viewed with misgivings the manner in which it proposed to oppose this legislation.

Confirmed the appointment of Dr. Marcel J. Foret as Chairman of the Committee on Arrangements for District of Columbia Day, to be held on the opening day of the Annual Meeting of the Southern Medical Association, November 12.

Selected Dr. Harry S. Bernton to be the Kober Lecturer in 1956. Dr. Bernton's lecture was given at Georgetown University on March 21.

Appointed a special committee to study the structure of the ANNUAL SCIENTIFIC ASSEMBLY and to submit its recommendations.

Approved a questionnaire prepared by the Committee on Medical Care for the purpose of obtaining data about current medical fees in the Washington Metropolitan Area.

Approved the selection of Mr. G. Elmer Flather, Vice President of the Union Trust Company, as a member of the Board of Trustees of the Society's Retirement Plan for Employees, to succeed Mr. Frank R. Strunk, deceased.

Directed that a canvass be made of the Society's membership, in response to a request from the AMA, to determine the views of members with respect to Social Security coverage for physicians. The result of the poll showed 572 in favor of voluntary coverage, 123 in favor of compulsory coverage, 37 disapproving both compulsory and voluntary coverage, and 5 disapproving compulsory coverage. These returns indicated the views of 737 out of a total Active and Life membership of 1,437. The information was transmitted to the Board of Trustees of the AMA.

Authorized a contribution of $50 to the Washington Academy of Sciences for the support of science education in secondary schools of the Greater Washington Area, and in support of the Annual Science Fair.

Voted to establish a special Committee on Hospitals.

Accepted the report of the Traffic Committee on a canvass of the Society's membership in regard to ambulance sirens. There was a response from 471 members. Of this number, 71 per cent did not think that sirens and excessive speed in ambulances were needed as a life-saving measure, and 82 per cent thought that they were generally unnecessary and a hazard to patients and the public. At the direction of the Board, a copy of the analysis was sent to the District Commissioners, Walter Reed and the Naval Hospitals, urging that traffic regulations be observed by ambulances under their jurisdiction.

Endorsed a bill to be introduced in the Congress which would regulate the practice of physical therapy by registered physical therapists in the District of Columbia.

Approved a course for physicians in medical care, mass casualties, and the organization of emergency medical services on a voluntary basis. The first course was held in the Society's auditorium, May 21–25.

Voted a contribution of $100 each to the Washington Chapters of the SAMA at George Washington, Georgetown and Howard Medical Schools to assist in defraying the expenses of the delegates to the national convention of the SAMA.

Approved the recommendation of the Council on Emergency Medical Service that members of the Society be canvassed for the purpose of obtaining volunteers to examine the District's reserve corps policemen without charge.

Dr. Yater presented to the Society for permanent membership 72 Active, 28 Associate, and 8 Resident-Intern members who had been elected previously for a probationary period of one year.

In closing, Dr. Yater commended the reading of the entire report by the membership. "I have perhaps had as good an opportunity as any to observe the operation of the Society," he continued. "In fact, I have been an active participant in its affairs for more years than all but a minority of our membership. I have always been impressed by the sacrificial spirit of the dedicated members whom I have known over the years. Fortunately, many of their kind are still active and rendering outstanding service to our organization."

Dr. Yater, who is entering his last year as Chairman of the Board, expressed his personal appreciation to the many members of the Society who have been of help to him in the performance of his numerous duties.

Report of the Secretary

"Close observers of the Society's activities will have noted that the emphasis shifts from year to year. More frequently than not, there are few innovations, but lively activity in whatever direction need is indicated or conditions require, is constant."

In this brief statement, the Secretary succinctly described the scope of the Society's activities for the past year.

STATE OF THE SOCIETY

Membership in the Society is still increasing, as the following figures as of May 1 over the past 10 years disclose:

	1946	1951	1956
Active	978	1,323	1,426
Life	76	78	69
Affiliate		13	26
Associate	215	361	482
Resident-Intern		9	23
Honorary	9	17	27
Total	1,278	1,801	2,053

Fewer membership luncheons were held in 1955–56 because the backlog of new members was not as great as in the previous year. Two luncheons had been held up to April 15, as compared with 7 during the same period last year. Since 1950, when the luncheons were inaugurated, 39 have been held, attended by approximately 767 members. In accord with the procedure established when first undertaken, the luncheons have been kept small and informal. Most of those who have attended have been enthusiastic about them and a number of them have expressed their appreciation for the opportunity of fraternizing with a small group of physicians, usually unknown to each other, and to learn at first hand something about the Society's history, its activities and finances.

The financial report was presented at the March Business Meeting of the Society and copies of the report are available at the Society's Executive Offices to members who may be interested in seeing them.

ACTIVITIES OF THE SOCIETY

Annual Scientific Assembly. In 1955, the Society reverted to its own sponsorship of the Annual Scientific Assembly and celebrated the Assembly's Silver Anniversary. No expense was spared in providing the best speakers available on the subjects in which they had gained recognition.

The Assembly was satisfying from the standpoint of attendance, which totaled 2,929. This included 982 members of the Society and 576 guest physicians. There were also 60 interns, 407 medical students, and 160 nurses; the balance of 744 was made up of medical and X-ray technicians, technical exhibitors, and a miscellaneous grouping.

There was a large attendance at the Annual Dinner, October 12, with entertainment provided by the Doctors Symphony Orchestra and the Medico Players. One of the highlights of the Assembly and the dinner was the presentation of an engraved silver tray to Dr. Charles Stanley White, who founded the Assembly. The same evening Certificates of Meritorious Service were awarded to Dr. William Earl Clark and Dr. Addison M. Duval. On the first day of the Assembly, Mrs. Henry Grattan Doyle received the John Benjamin Nichols Award for her contributions to the betterment of the health of the people of the District of Columbia.

Dr. Alfred A. J. Den was General Chairman of the Committee on Arrangements for the Assembly. He was assisted by an able corps of committee chairmen.

Midwinter Seminar. Any misgivings which officers of the Society had about the permanence of the Midwinter Seminar were dissipated when the "fifth edition" was presented February 14, 15 and 16 on the subject, "Diseases of the Thyroid Gland." Too much credit for the success of the Seminar cannot be given Dr. Theodore Winship, who was designated program chairman for the Seminar. In addition to selecting excellent local talent, he secured such eminent out-of-town physicians as Dr. John C. McClintock, of Albany Medical College; Dr. Edgar L. Frazell, of Memorial Center in New York City; and Dr. George Crile, Jr., of the Cleveland Clinic. An unexpected feature of the Seminar this year was a closed circuit TV program, Grand Rounds, presented by the Upjohn Company on the second evening. The subject was "The Cardiac Patient in Stress." This feature attracted one of the largest audiences ever assembled in the Society's building, more than 700.

Medical Annals. In his report, the Secretary stated that comments on the improvement of the journal's scientific content have come to the attention of the editors. Despite its limited circulation, the ANNALS is more widely read throughout the country than most state medical journals and is rated as one of the best publications in its field. The circulation figures for 1955, as compared to 1954, show a small increase in the various classifications, principally in membership subscriptions.

Medical Bureau. The number of subscribers to the BUREAU's Secretarial Service continues to increase. In preparation for further expansion, another secretarial switchboard has been obtained but not yet installed. With the installation of this extra position, the BUREAU will have 6 switchboards in operation for Secretarial Service and 2 for Alternate Listing Service. Should further expansion of the BUREAU's facilities be necessary, its quarters will have to be enlarged.

An analysis of the calls handled by the BUREAU in 1955, as compared with 1954, showed a 14 per cent increase in messages taken for physicians and a 19 per cent increase in referrals (a referral constitutes giving the names of 3 physicians upon a telephone request for the name of a physician).

On March 1, 1956, the BUREAU had 759 physician-subscribers, which included 410 for Secretarial Service (20 of whom have 2 lines) and 349 for Alternate Listing Service. On March 1, 1955, there were 736 subscribers, 361 for Alternate Listing Service and 358 for Secretarial Service, 17 of whom had 2 lines. Thus, for the first time, requests for Secretarial Service have taken precedence over Alternate Listing Service. In addition to its physician-subscribers, the Bureau has direct tie-lines to 8 local hospitals, and to Central Ambulance Service, Group Hospitalization, Inc., and Hospital Service Agency.

Medical Service of D. C. Enrollment in Medical Service of the District of Columbia continued to grow rapidly in 1955. At the close of the year there were 537,065 enrolled as compared to 461,095 on December 31, 1954. On March 1, 1956, there were 1,420 Participating and 444 Coöperating Physicians, a total of 1,864, or an increase of 230 participants over 1954.

The income from subscribers' dues, before operating expenses, showed $5,887,038.75 at the end of 1955, an increase of almost $800,000 over the preceding year. Operating expenses went up slightly, 9.5 per cent of subscription income in 1955 as compared with 9.1 per cent in 1954. The Secretary of the Society continues as Secretary of the Service and a member of the Board of Trustees, without a vote, which offices he has held since the Plan was organized.

Group Hospitalization. On March 1, 1956, there were 1,121 subscribers to the Doctors' Group of Group Hospitalization, Inc., as compared with 1,043 subscribers on March 1, 1955. This increase is due largely to the number of newly elected Society members who, with few exceptions, seek the group coverage offered by GHI.

The Preferred Hospital Contract, which was first made available to members of the Society in February, 1955, has proved popular. As of March 1, 1956, 619 members and 74 of their dependents had the Preferred Contracts, while 375 members and 53 dependents were covered under the Standard Contract. Members not enrolled under the Preferred Plan are urged to investigate the additional benefits offered at small cost. Applications for participation must be made during August, 1956 to the Group Treasurer, who is the Secretary of the Society.

New contracts will become effective September 1. Transfers from other Blue Cross Plans, of which GHI is a member, are accepted at any time upon application to the Society's Group Treasurer.

Health and Accident Insurance. Many members have expressed satisfaction with the Society's Health and Accident Plan, written by Mutual of Omaha. Among the advantages to Active members (to whom the coverage is restricted) are: no age termination provision; confinement not required; pays lifetime accident benefits and 5 years of sickness benefits; defines disability as inability of the individual member to practice his or her specialty in medicine or surgery.

On April 1, 1956, 980 had purchased this insurance, whereas on April 1, 1955 there were 960 participants.

Malpractice Insurance. In previous reports, members have been made aware of the seriousness of the malpractice situation in the District of Columbia. About a year ago, the Society's Committee on Professional Liability Insurance, under the able chairmanship of Dr. Alfred A. J. Den, decided to make an intensive effort to improve the situation. Among other efforts, an insurance company was sought which would write a satisfactory policy in which the Society would be a factor. The Committee corresponded with 22 carriers, from which it decided that the individual policy and agreement offered by the St. Paul Mercury Indemnity Company was most satisfactory. The policy was considered the most comprehensive offered and the terms of the agreement with the Society met most of the objectives of the Committee. The Society at a meeting, September 21, 1955, approved the policy, which had received the endorsement of the Executive Board. On April 1, 1956, over 400 members had applied to the St. Paul Mercury Indemnity Company for coverage.

ACTIVITIES OF THE SECRETARY

In his report, the Secretary reviewed some of his "extracurricular activities." He is a member of the Executive Committee of the Conference of Presidents and Officers of State Medical Associations. He is a member and chairman of the Public Relations Advisory Committee to the American Medical Association. On the recommendation of the President of the Medical Society, he was appointed a member of the Special Committee of Consultants on the Content of the Hall of Health, to be installed at the Smithsonian Institution. He has been designated Director of the National Health Fair, scheduled to be held in Washington in 1957.

The Secretary continued as Professorial Lecturer on Medical Economics at Georgetown University School of Medicine, where he conducted 6 classes on topics having to do with a physician and the economics of his practice. During the past year he addressed the senior class of Howard University School of Medicine on "Office Management." He was moderator of a panel discussion type program, "The Question Hour," repeated for the fourth time at the D. C. General Hospital on April 26. He gave two talks, the first on "The Medical Society Executive—Yesterday, Today and Tomorrow" at the First Institute of the Medical Society Executives' Conference, which was held in Chicago in February, and the second on the subject, "Look Again, Doctor!" at the Sixth Annual Scientific Assembly of the Virginia Chapter of the American Academy of General Practice, held in Hot Springs, Virginia, March 2.

In closing his report, the Secretary stated that this had been "a satisfying year." "There have been vexing problems," he added, "particularly in the malpractice field, and there are some indications that other serious problems are immediately ahead. Undoubtedly, these are a challenge which are a good thing for the Society and its Secretary." He expressed his indebtedness to the officers of the Society and to members for their valuable assistance and for the consideration shown him. He also thanked the administrative staff for their loyal and tireless efforts.

ELECTION OF OFFICERS

The nominees for office, presented to the Medical Society by its Nominating Committee at the Business Meeting, March 7, were presented to the Society by the President, and were unanimously elected. The new officers are:

President-elect: Dr. James W. Watts
First Vice President: Dr. Irving Burka
Second Vice President: Dr. Shirley Martin
Member of the Executive Board: Dr. W. Ross Morris
Member of the Board of Censors: Dr. W. Leroy Dunn
Delegate to the American Medical Association: Dr. Raymond T. Holden
Alternate Delegate to the AMA: Dr. Herbert S. Gates

Dr. Ralph M. Caulk, President-elect during 1955–56, will take office as President of the Society on July 1, 1956. Dr. Watts will take office as President on July 1, 1957. With the exception of the delegates to the American Medical Association, officers begin their terms of office on July 1, 1956. Dr. Morris will serve for four years on the Executive Board, and Dr. Dunn for three years on the Board of Censors. In view of his election to the office of President-elect, Dr. Watts resigned from the Board of Censors. Dr. Charles P. Ryland, whose own term of office on the Board of Censors will conclude on June 30, was elected to complete Dr. Watts' unexpired term of one year. The delegates to the AMA, Drs. Holden and Gates, will serve for a two-year period, beginning January 1, 1957.

Following the election of officers, Dr. Watts was escorted to the platform by Drs. Harry Zehner and R. Massie Page. Dr. Watts graciously acknowledged the honor the Society was bestowing upon him by voting him into its highest office.

At this point, Dr. Morris relinquished the chair to Dr. Yater, who, in a brief speech, commended Dr. Morris for his year in the presidency and presented him with a gavel as a token of the Society's love, admiration, and respect. Dr. Morris responded with appreciation of the symbolic gift and stated it would be a constant reminder to him of his year in office, which had been "a real joy and a lot of work."

REPORT OF BOARD OF CENSORS

In presenting his report, the Chairman of the Board of Censors, Dr. James W. Watts, described in general the new procedure under which applicants are screened for membership in the Society.

Applications for membership are received by the Secretary. Periodically a mimeographed list of the applicants is sent to the membership, showing the names of the applicants, their addresses, the name of the medical school from which they graduated, year of graduation, and the names of their endorsers. Following notification, a period of two months must elapse to provide members an opportunity to register their approval or disapproval of any applicant with the Board of Censors. During this interval, the Board interviews each applicant personally. When the two months are up, the Board forwards its recommendations with respect to the applicants to the Executive Board, which elects or rejects them by a majority vote. If elected, the applicant becomes a member for a probationary year, when he must be confirmed as a permanent member by the Society itself.

Since May 1, 1955, the Board interviewed 91 applicants for Active membership, 38 for Associate, and 7 for Resident-Intern membership. Most of these applicants have already been recommended for election to membership.

The Board of Censors attempts to exercise every care in determining the qualifications of the applicant for membership. Letters are written to medical societies to which the applicant has previously belonged to ascertain his professional standing and membership status. If he has served with the armed forces, he is required to provide the Board with photostats of documents showing that he has served honorably. Thus the Board endeavors to assure the Society that only the highest type physicians are elected to membership.

DISTRICT'S HEALTH PROBLEMS PRESENTED

In awaiting the appearance of the Honorable Robert E. McLaughlin, President of the Board of Commissioners of the District of Columbia, who had promised to discuss some of the District's health problems at the annual meeting, Commissioner David B. Karrick was introduced. Mr. Karrick, a new member of the Board of Commissioners, has been delegated the health affairs of the District of Columbia, taking over those duties from Mr. McLaughlin, who is now President of the Board. Mr. Karrick said that he was endeavoring, among other things, to make a personal visit and inspection of every institution that comes under the jurisdiction of the District Commissioners.

Mr. McLaughlin discussed many of the health problems which are currently confronting the Commissioners. The paper he presented is published in this issue of the MEDICAL ANNALS.

SUPPLEMENTARY REPORT OF THE EXECUTIVE BOARD

As is usually the case, this report deals largely with matters arising subsequent to the completion of the Annual Report of the Chairman of the Executive Board. However, there were a few items in the Report which it seemed advisable to enlarge upon, or which of necessity were carried over from a previous business meeting of the Society.

Unless some emergency arises this report is the final accounting which the Board will present during this organizational year. Should the necessity arise the Board will, of course, call a special meeting of the Society as provided by the Society's Constitution and By-laws.

Council on Vocational Rehabilitation. At the business meeting of the Society on September 21, 1955, it was reported that the Executive Board had created the Committee on Vocational Rehabilitation. It was further reported that the inauguration of a pilot program under the Committee's direction was being considered. In anticipation of this activity the Committee recommended to the Board that it be renamed the Council on Vocational Rehabilitation of the Medical Society of the District of Columbia; that the Council affiliate itself with other organizations having to do with the total restoration program of the handicapped; that the Council be authorized to draft a blueprint for a pilot vocational rehabilitation program for the Washington Metropolitan Area; and, finally, that the Council be authorized to request funds available through the Office of Vocational Rehabilitation of the Department of Health, Education and Welfare to implement its program. The Board concurred in these recommendations, as did the Society.

The purpose of this portion of the Supplementary Report is to bring members up to date on what has taken place since the above meeting. On application of the Council, the Office of Vocational Rehabilitation, HEW, made available funds in the amount of $18,576.00 to "study existing rehabilitation facilities in the Washington Metropolitan Area and assessment of present and future needs." The Office directed that these monies be expended in specified amounts for personnel, consultants, supplies, administration and other expense.

Following receipt of these funds, the Council met on several occasions to discuss its plans. It came to the conclusion that considerably more funds would have to be made available if a worthwhile project was to be undertaken, and reported this fact to the Office of Vocational Rehabilitation, HEW, with the request that the necessary funds be granted. These were denied.

The Council was reluctant to proceed; in fact, at one time it decided not to do so. However, this action was reconsidered and the Council voted to go ahead with the assurance that part-time medical direction would be provided by the Office of Vocational Rehabilitation, HEW, through its medical staff. Prior to this decision, representatives of adjacent county medical societies in Maryland and Virginia within the Metropolitan Area had been added to the Council membership. The Council now voted to include representatives of the ancillary medical services.

The Council's program will now definitely get under way, June 1, 1956, with the employment of an administrator and secretary. As the program develops, the Council will report to the Board, which will apprise the Society of the progress being made.

Course for Physicians in the Care of Mass Casualties. No committee in the Society has had a more frustrating experience than the Committee on Emergency Medical Service of the Washington Metropolitan Area. When the Committee was first organized it was with the understanding that it would develop an adequate Civil Defense medical program on a voluntary basis. The program had progressed to a point where it appeared that it would be placed in operation when the Federal Government took a hand. Civil Defense medical programs were in most communities, including the District of Columbia, placed under the direction of Public Health departments. In the 8 or 9 years which have followed, little progress has been made. In fact, at the present time there is no Civil Defense medical program in the District except as it appears on paper.

It should be said that the Committee has on several occasions been vocal in its protest against the indifference and apathy toward the local Civil Defense medical program; nevertheless, there has been little action, or interest for that matter, in places in the Federal or local governments where it would count. Most disturbing to the Committee has been the fact that not only is the Civil Defense medical program nonexistent, but there is no emergency medical plan should there be a natural disaster.

This situation has culminated finally in the recommendations of the Committee, urging the establishment of a course for physicians in medical care of mass casualties and the organization of emergency medical services on a voluntary basis. These recommendations have been approved by the Board and the Society.

The first step in this voluntary effort will be the presentation of a course for physicians in medical care of mass casualties, which is scheduled to be held in the Medical Society's auditorium, May 21–25, 1956. It is hoped that every physician who finds it possible will be present during this course, the details of which will be announced within the next week.

The Committee is enthusiastically behind this project in the belief that it offers the Society its greatest opportunity to safeguard the health and well-being of District citizens in the event of a natural disaster or an enemy attack.

National Library of Medicine. As members of this Society who have used the facilities of the Armed Forces Medical Library are well aware, the existence of the world's greatest collection of medical books has long been threatened because of incredibly inadequate housing. The hazards of fire are particularly great. This has been pointed out time and again through the years by succeeding administrations, Government officials, the American Medical Association, and our own Society.

At the present time there is a bill before the Congress, S.3430, which would create a National Library of Medicine. The Armed Forces Medical Library would become the nucleus of the institution. Authorized in the bill is the construction of a building estimated to cost between 6 and 7 million dollars. The acceptance of private contributions for supplemental support would be permitted.

The bill also provides that the new library would no longer be a "budgetary stepchild" of the Department of Defense but would be an independent agency.

The Executive Board had this legislative proposal before it at its meeting on March 26, and unanimously favored it, providing the library is established under Government medical supervision. The Board's position, in principle at least, is in line with previous actions of the Society with respect to the Armed Forces Medical Library.

Poliomyelitis Vaccine. Following the announcement at the meeting of the American Academy of Pediatrics in Miami, October 1953, that success had attended the use of Salk Vaccine, the Chairman of the Society's Committee on Public Health participated in discussions on the subject at the offices of the District's Department of Public Health. It was decided that the District would not participate in the "Field Trial Program" in the spring of 1954.

Early in 1955 the whole question was reviewed by a group representing the medical profession, the District Chapter of the National Foundation for Infantile Paralysis, and the schools of the District. It was unanimously agreed that the Foundation's program be followed for school children in the first and second grades. Physicians were asked to volunteer their services for the purpose of administering the vaccine. Their response was most gratifying and a great credit to the Society.

The first injection given in the schools was on April 26, 1955. Before the second injection could be given, the much publicized unfortunate incidents occurred involving some of the vaccine released in other parts of the United States. The Public Health Service recalled all vaccine and all programs were held in abeyance.

In May 1955, the D. C. Department of Public Health requested the formation of a Technical Advisory Committee on Polio Vaccine. At the request of Dr. Daniel L. Seckinger, Director of Health, Drs. W. Montague Cobb, George Maksim, and Preston A. McLendon were appointed to represent the medical profession. Additional members of this Committee included representatives from the Pharmaceutical Association, the school system, the District Chapter of the National Foundation for Infantile Paralysis, and the public at large. This group has met with representatives of the Department of Public Health on many occasions since May 1955.

Designation of priority groups has been changed whenever it seemed advisable. On March 14, 1956, the priority groups were extended to include children from 6 months through 14 years of age, and pregnant women whose expected date of confinement was May 1–November 1, in so far as the supply of vaccine permitted.

As of April 23, 1956 the District of Columbia has had allocated, exclusive of the National Foundation for Infantile Paralysis program, 153,952 c.c. of polio vaccine, of which the private physicians have received 78,456 c.c. and the Department of Public Health 75,496 c.c.

Since many doctors in the District have patients residing in Virginia and Maryland, discussions have been taking place which will apparently result in having the neighboring states reassign some of their allocation of vaccine to District physicians who have given polio vaccine to patients within the priority groups mentioned.

The membership of the Society has from time to time received memoranda through the mail in regard to polio vaccine, and articles have appeared on the subject in the MEDICAL ANNALS. At present members are advised that in so far as vaccine is available, all children in the mentioned priority group be given at least one dose (1.0 c.c.) of vaccine this spring, to be followed by a second dose not less than 4 weeks later. Third injections are not recommended less than 7 months after the second dose, and only after all others in the priority groups have received 2 doses of polio vaccine.

Campaign to Improve Care of Laboratory Animals. At its meeting on April 23, 1956 the Executive Board was requested to endorse the objectives of an organization known as WARDS (Welfare of Animals Used for Research in Drugs and Surgery) whose purpose is "the improvement of care of laboratory animals in institutions where funds are limited."

This organization, according to a statement submitted by one of its representatives who is also an Active member of our Society, grew out of the idea that "investigators would welcome improvement in animal care since the health of the animal was of vital importance to the accuracy of research findings." Consent from the local medical schools, that is, Georgetown and George Washington University Schools of Medicine, was obtained. Funds are now being sought in an effort to realize the objectives of the organization.

The Committee on Public Policy, to which the project was originally presented, voted to recommend to the Executive Board the endorsement of the fund-raising campaign, as proposed by the WARDS Washington Committee, for the purpose of providing improved housing for laboratory animals at Georgetown and George Washington University Schools of Medicine. The Board endorsed this recommendation with the proviso that the funds raised be used for no other purpose than providing improved animal quarters at the above named institutions; the action taken was based on the understanding that housing for laboratory animals at Howard University School of Medicine, not mentioned above, is adequate.

Adoption of Amendments XXIX, XXX and XXXI to the Constitution and By-laws. The following amendments were read at the business meeting of the Society on March 7, 1956 with the explanatory paragraph which follows each. They are now submitted for adoption:

AMENDMENT XXIX

Article VIII, Chapter VIII of the Constitution and By-laws is hereby amended by adding thereto the following:

Section 3. The Grievance Committee shall consist of twelve members of the Society, whose tenures of office shall be as follows: four members shall be appointed by the President on the expiration of the tenures of the present Committee members for a period of one year; four members shall likewise be appointed for a period of two years; four members shall likewise be appointed for a period of three years, and on the expiration of the respective tenures of office subsequent members shall be appointed for a period of three years. Members shall not be eligible for reappointment the year following the expiration of a three-year term.

The purpose of the above amendment is to assure the stability of a very important committee of the Society. It requires time and experience to season a member adequately for this demanding assignment.

AMENDMENT XXX

Section 1. Article 1 of Chapter VIII of the Constitution and By-laws is hereby amended by adding thereto the following: 12. Committee on Medical Ethics and Professional Conduct.

Section 2. Chapter VIII of the Constitution and By-laws is further amended by adding thereto the following: Article XIV. The Committee on Medical Ethics and Professional Conduct upon request of a member of the Society, the Executive Board or any committee of the Society shall review activities of members in relation to the Principles of Medical Ethics of the American Medical Association and report thereon to the respective individual and/or bodies submitting the request.

Section 3. The Committee on Medical Ethics and Professional Conduct shall consist of seven members appointed by the President and confirmed by the Executive Board on or before July 1, 1956, three of whom shall be appointed for three years, two for two years, and two for one year. On expiration of their respective tenures, subsequent members shall be appointed by the President and confirmed by the Executive Board for a period of three years. Members shall not be eligible for reappointment the year following a three-year term.

The reason for the proposal of this amendment is to relieve the Grievance Committee, which is already heavily burdened, with the responsibility for interpreting the ethical nature of matters brought to its attention.

AMENDMENT XXXI

Article II of Chapter IX of the Constitution and By-laws is hereby amended by adding thereto the following: Section 12. Section on Internal Medicine and Allied Subspecialties.

At its meeting on February 27, 1956 the Executive Board received a petition from a group of internists requesting that a Section on Internal

(*Continued on page 356*)

THE HEALTH SITUATION IN THE DISTRICT OF COLUMBIA AND WHAT PRIVATE PHYSICIANS CAN DO TO IMPROVE IT*

THE HONORABLE ROBERT E. McLAUGHLIN
President, District of Columbia Board of Commissioners

Having been asked to talk on that subject to a group of professionals, I, a layman, shall have to adhere closely to phases of public health. I am somewhat more familiar with that area, having had the responsibility for the Department of Public Health, as one of several large departments of the District Government, for about a year.

Public health, as the name implies, is a public undertaking, a public responsibility, which is mutual in its obligations and its benefits. It can be effective only in so far as it is understood and participated in by all of the people. It is a human institution. It is not the "same" yesterday, today, and tomorrow. It is dynamic, subject to change, and growing constantly.

"Public health cannot afford to be the same today as it was yesterday, or as it will be tomorrow," wrote Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, recently. "For while we are thinking about public health today, while the clock ticks away the next half hour, 40 people in the United States will die of cardiovascular disease. In the same 30 minutes, another 12 will die of cancer. Five more will die of accidents. That is the toll which these causes alone exact every half hour today, and will exact every half hour tomorrow."

In the District of Columbia itself 1 person dies every hour; better than 2 infants under 1 year of age die every day. On the average 1 person dies every 48 hours from diseases of the heart.

Each and every physician here tonight shares in the responsibility for the health of residents of this community. Many of you know full well the changing picture in the health situation in your own practices. Ten years ago few of the myriad of antibiotics which all of you prescribe were known, much less used. Today these are your "stock in trade." How would you like to practice without some of these so-called miracle drugs?

Even 5 years ago, if I were to take an airplane flight it was considered to be a calculated risk that I might be very, very uncomfortable. Today that is unnecessary. Your prescriptions can make me withstand the flight and truly enjoy it.

As your work changes from day to day, so it is with public health. It does not remain static. The problem of conquering one after the other of the infectious diseases which once caused high mortality in the young now gives way to the problems of chronicity and degeneracy.

In 1955 the provisional general death rate in the District was 9.6 per 1,000 population. That is a continuation of the favorable mortality experience of recent years. It is quite likely that this general death rate will continue until considerably more is known about diseases of the heart and malignant neoplasms. More than 50 per cent of the deaths occurring in Washington each year are due to these categories of disease. This, then, is one area in which you as private physicians can lend a hand to improve the health situation in our City. Attention has been focused on the heart condition of one of our very important neighbors and to cancer of the lungs. With the pros and cons of these diseases making untold news in the daily press, magazines, radio and television, all of us laymen have become increasingly aware of these killers. It is my understanding that routine, yearly chest X-ray films are helpful in the early detection of these diseases.

Tuberculosis deaths increased from 123 in 1954 to 132 in 1955, thus halting the steady annual decline which began in 1947 when there were 528 deaths. The number of new cases of active tuberculosis reported also increased in 1955 to 650, whereas there were 591 new active cases reported in 1954. In spite of the newer drugs with which to treat tuberculosis when it is found, we cannot be complacent about the spread of tuberculosis in the District. Here also is an area in which you as private physicians, in close contact with Washington's residents, can materially aid in the continuing attack on tuberculosis. The public health agency cannot do this single-handed. Are you recommending an X-ray examination of the chest to all of your patients? Your patients will probably take your advice much more readily than they would an announcement in the paper or over the radio that it is worthwhile to have a chest X-ray film made annually. The Department of Public Health is helping you in this matter by the mobile X-ray units strategically located throughout the City. You should offer that advice to all of your patients, especially those over 45 years of age.

---

* Remarks delivered at the Annual Business Meeting of the Medical Society of the District of Columbia, May 2, 1956.

The provisional infant mortality rate, based on infant deaths and births recorded in Washington for 1955, is 27.3, an increase of 10 per cent over the rate for 1954. The white infant mortality rate is slightly higher than that for the previous year. However, the non-white rate is 15 per cent higher than the rate for 1954. It is not possible to reveal at this time whether this increase in mortality has occurred mainly during the first few hours and days of life or throughout the first year of life. When the final figures are collected and tabulated this point, we hope, can be more accurately determined. I am told that infant mortality is a very delicate index of the health status of a community, and if this increase continues for more than a year it is a problem confronting you as private physicians as well as the Public Health Department. Your assistance in accurate reporting on the supplemental stubs of birth and stillbirth certificates can contribute the facts upon which proper action can be taken.

Washington had no diphtheria death, no measles death, no whooping cough death, no typhoid fever death, and no dysentery death in 1955. Only 86 deaths were attributed to the host of communicable diseases other than tuberculosis. The growing importance of infectious hepatitis was emphasized by the occurrence of 7 deaths attributed to this disease in 1955, whereas in 1954 there were 3 deaths from it. Any sudden upsurge in any of the diseases must be noted, and while it is your responsibility as private practitioners to report cases of communicable diseases to the Health Department, the official agency receives the reports from perhaps 2,000 sources and can determine the picture quickly. The importance, therefore, of your continued coöperation in this area may be readily understood. It is a very vital responsibility, since there are about 60 diseases in this category.

Although there was a decline of approximately 10 per cent in the number of deaths due to accidents (other than motor vehicle accidents) in 1955 compared with 1954, many of the 283 could probably have been prevented. The accident mortality is known, but what about the accident morbidity? It is possible to obtain an estimation of the number of hospitalizations resulting from accidents, but the number and scope of accidents which occur for which there is no hospitalization can never be determined. This is a problem which you, as private physicians, and we, in the public agency, must attack together. More and better education and information about prevention and treatment of accidents are urgently needed. We must coöperate to reduce the hazards and costs of this, the fifth in the leading causes of death in Washington.

Now let me turn to another problem with which I'm sure you are all interested and concerned, the health program of school children. The school health pilot study, begun in the fall of 1954 and continuing to date in 1 parochial and 8 public elementary schools, is of importance. The provision of more adequate public health nursing time made it possible to introduce and develop a number of recommended changes in the school health services at these schools. Among the changes introduced have been participation of private physicians in school health examinations when requested by the parents; revision of the method of selecting and scheduling pupils for physician examination based on teacher observation, teacher-nurse conference, and physician referral; revision and development of new records; and more adequate referral and follow-up of pupils with defects needing correction.

The first of these changes is one in which, I believe, you can be of tremendous help to the school children of this community, that is, your participation in the health examination when requested by the child's parents. In this demonstration the family physicians, when asked by the parents, have given the youngsters a careful and thorough medical examination in their private offices with the parent standing by. The medical examination record provided by the Department of Public Health was filled out in detail and sent to the school. Pupils whose parents did not request family physicians to examine their children were then examined by the Department's school physician. With a considerable reduction in the number of children to examine, the school physician could then devote much more time to a complete and thorough examination. Parents were urged to be present with the child when the school physician made his examination. Both family physicians and school physicians could then make recommendations to the parents about the health status of the child. Defects noted by the physicians were told to the parent and the child with suggestions for correction or alleviation of the defect. Later, then, the Health Department's school nurse could follow up with the parent and the child to determine what progress was being made in removing the defect or the handicapping condition. Isn't it true, the earlier such defects can be corrected the better progress the child can make in school and in life generally?

Next fall it is anticipated that this scheme will be put into practice throughout the city. Here, then, is when you as private family physicians can really coöperate with the public health agency and render a yeoman service to the school children of this community.

Within the next month the annual registration for entrance to school will be held. This same scheme is being recommended for those who will enter school for the first time. We solicit your coöperation in this phase of the program. In these two programs alone, you as private physicians can make a very definite contribution to the health situation in the District of Columbia.

Not many weeks ago I had the privilege of speaking to another important citizen organization in this community, the United Community Services' Family and Child Welfare Section. At that time I said that buildings alone will not solve welfare problems. The answer is not to build more and more institutions, but to provide services in order to eliminate the need for costly, and sometimes fruitless institutional care.

In relation to public health services the same holds true. Although additional facilities and buildings are essential, it is the people of this community as individuals, the physicians as experts in the various specialties, and the public health agency working together that determine the degree to which a city maintains its health. The responsibilities cannot be delegated to the Health Department alone with the expectation that the community's health is taken care of. It takes more than that. It means we must all team together and work toward the common goal of improving our own health, of practicing the elementary health habits, of taking the necessary precautions and preventive measures which we now have to improve individual health. When each individual maintains good personal health, the health of the community at large is greatly improved.

In conclusion, I believe that the health situation in the District of Columbia will depend upon how well the people are informed on health matters and on how active they become in meeting the public health problems. Your members, who are in daily contact with these people, can do much to influence them to help themselves in all matters pertaining to their personal health, which in turn will improve the community health. It is to you physicians that most people in the city turn first for counsel and guidance in health matters. We in The Commissioners' Office have been most appreciative of your support and coöperation. We look forward to even more, as the changing problems of health, particularly public health, present themselves. Only through the combined efforts of the private physicians and the voluntary health agencies can we in the District Government hope to maintain and improve the favorable health situation in Washington.

With the recent change in my assignment and responsibilities as a Commissioner, the jurisdiction changes, and Commissioner David B. Karrick has now assumed those duties. It is a tremendous responsibility and requires some months to become acquainted with the people in the District Government, as well as those outside of the official family interested in the health and welfare activities. I know that Commissioner Karrick is an able administrator, and we look to him to face the problems and challenges of public health with vigor and courage. It is my feeling that tonight is a splendid opportunity for you to meet Commissioner Karrick.

News and Personals

MEETINGS

President's Night, again a festive occasion, was held this year on April 19. The Doctors Symphony Orchestra, under the direction of Mr. Richard W. Dirksen, gave a pleasing performance at the beginning of the program.

A new flag of dark blue silk embroidered in gold, showing the Society's seal, was presented to the Society in behalf of the Woman's Auxiliary by Mrs. Lawrence A. Rapee, President of the Auxiliary. The flag will occupy a regular place on the Society's stage in the future.

The highlight of the evening was the presentation of Certificates of Appreciation to living Past Presidents by Dr. W. Ross Morris, this year's President. Those present to receive the certificates were: Dr. Edward Young Davidson, the oldest living Past President; Dr. Henry C. Macatee, President in 1921 and for many years Secretary of the Medical Society; Drs. Charles Stanley White, Sr., Harry H. Kerr, Arthur C. Christie, A. B. Bennett, John Hugh Lyons, Daniel LeRay Borden, A. Magruder MacDonald, Fred R. Sanderson, William Earl Clark, Raymond T. Holden, John Minor, William M. Ballinger, Frank D. Costenbader, Herbert P. Ramsey, and Preston A. McLendon. Those unable to be present were Drs. William H. Hough, Prentiss Willson, William J. Mallory, James N. Greear, Jr., William P. Herbst, Jr., Walter Freeman, and Wallace M. Yater. In a brief paragraph or two Dr. Morris gave an apt appraisal of each President's year of duty and his relationship with the Society during his tenure of office.

Following the program, a reception was held in the Library, where refreshments were served. Those who attended spoke of the evening as being one of the most delightful they had attended in the past few years.

The Section on Neurology and Psychiatry met in the Medical Society's Library, May 3. Dr. Lewis Klein read a paper on "Parkinsonism and Related Basal Ganglion Diseases." Dr. Elizabeth Roboz, Associate Professor of Biochemistry, Georgetown University School of Medicine, presented a paper on "Experimental Demyelinization."

The Section on Anesthesiology of the Medical Society of the District of Columbia and the District of Columbia Society of Anesthesiologists held their last meeting of the 1955–56 season in the Medical Society's Library, May 7. The following officers will serve during 1956–57:

> Dr. William H. Devlin, *President*; Dr. William E. Bageant, *Vice President and President-elect*; Dr. Arch S. Russell, Jr., *Secretary-Treasurer*; and Drs. Ervin N. Chapman and Charles S. Coakley, *members of Executive Committee for 1 year.*

The first regular meeting of the newly formed **Section on Internal Medicine and Allied Subspecialties** was held in the Medical Society's auditorium, May 9. The following officers were elected for the coming year:

> Dr. Henry D. Ecker, *Chairman*; Dr. Benjamin Manchester, *Vice Chairman*; Dr. William K. Billingsley, Jr., *Secretary-Treasurer*; Dr. Clayton B. Ethridge, *member of Executive Committee for 2 years*; and Dr. Stuart O. Foster, *member of Executive Committee for 1 year.*

Physicians in the practice of internal medicine and allied subspecialties are invited to apply for membership in this new Section.

The Eighth Annual Meeting of Participating Physicians of Medical Service of the District of Columbia was held in the auditorium of the D. C. Medical Society on April 25. The following members were elected to the Board of Trustees: Dr. Henry D. Ecker and Dr. W. Robert Perkins, Jr., representing the District Medical Society; Dr. John S. Haught, representing adjacent medical societies of Maryland;

and Dr. John D. Zylman, representing adjacent medical societies of Virginia.

Reëlected to the Board of Trustees were Drs. Donald Stubbs, Daniel L. Seckinger, and G. Halsey Hunt; also Messrs. Bruce Baird, Robert M. Holmes, Jr., Robert C. McCann, and Philip M. Talbott.

Continuing as members of the Board of Trustees are Drs. Frank D. Costenbader, Henry L. Darner, James A. Dusbabek, Edgar M. McPeak, and Theodore Wiprud, *ex officio.*

The Board of Trustees met for election of officers at the Metropolitan Club, May 15. Officers who will serve during 1956-57 are: Dr. Stubbs, President; Dr. Hunt, First Vice President; Dr. Dusbabek, Second Vice President; Mr. Wiprud, Secretary; Mr. George B. McGovern, Assistant Secretary; Mr. Baird, Treasurer; Mr. Nelson Foster and Mr. Douglas R. Smith, Assistant Treasurers. Members of the Executive Committee are Dr. Stubbs, Chairman, and Drs. Darner, Dusbabek, Hunt, and Mr. Holmes.

The Seventh Annual Garfield Staff Dinner, held on April 30 at the Kennedy-Warren, was well attended. The Harry Hyland Kerr Award, given annually to the author of the best medical paper submitted by a member of the house staff, went to Dr. Gerold Klein for his paper, "Experimental Evaluation of a Divided Rolling Mattress for Spinal Traction," which was read at the meeting. Second and third prizes were awarded, respectively, to Dr. Joachim Sommer for his essay on "Cancer of the Stomach" and to Dr. James K. Gordon for his paper on "Agammaglobulinemia."

Another pleasant custom was carried out at the dinner, the presentation of gold-headed canes to Drs. John A. Talbot and William H. Hough. This method of honoring staff members for distinguished service was begun in 1951 when Dr. Harry H. Kerr received the first cane.

Since the first dinner, the number of staff members and alumni in attendance has steadily grown. Some excellent papers have been presented during the past years, several of which have been published in the MEDICAL ANNALS.

Children's Hospital Alumni Reunion was held May 26. Dr. Stewart H. Clifford, Assistant Clinical Professor of Pediatrics at Harvard Medical School, gave the Joseph S. Wall Memorial Lecture on "Postmaturity with Placental Dysfunction." Following the talk, Dr. Clifford took part in a Panel Discussion on Problems in the Care of Newborn and Premature Babies, with Dr. John A. Washington acting as moderator. Other panelists were Dr. Harry Gordon, Associate Professor of Pediatrics, Johns Hopkins University Medical School; Dr. John L. Parks, Professor of Obstetrics, George Washington University School of Medicine; and Dr. Leroy E. Hoeck, Chief of Pediatrics, District of Columbia General Hospital.

MEDICAL SOCIETY'S NEW FLAG

MRS. LAWRENCE A. RAPEE, President of the Woman's Auxiliary, presents the Medical Society's new flag to PRESIDENT MORRIS on President's Night, April 19.

HONORING A DISTINGUISHED PAST PRESIDENT

Dr. Edward Young Davidson (left) receives a special Certificate of Appreciation from Dr. W. Ross Morris, President of the Medical Society, on President's Night, April 19. Similar certificates were awarded to all living Past Presidents of the Society.

The District of Columbia Trudeau Society presented a Panel Discussion on Fungus Infections Endemic in This Area at its meeting, April 12. Dr. William Middleton, Medical Director of Veterans Administration, was moderator. Among the panelists were two members of the District Medical Society, Dr. J. Winthrop Peabody, Jr., Instructor in Thoracic Surgery, Georgetown University Medical School, and Dr. Lorenz E. Zimmerman, Senior Pathologist of the Armed Forces Institute of Pathology. The meeting was held at the Clinical Center of the National Institutes of Health.

George Washington University School of Medicine was host to the **Halsted Society** for its Annual Meeting, May 3, 4 and 5.

Members of the Society were welcomed at the opening session by Dr. Walter A. Bloedorn, Dean of the Medical School. Brief presentations on a variety of surgical subjects were made by the following members of the George Washington staff: Drs. John Keshishian, Howard Pierpont, Stanley Baker, Owen Gwathmey, J. R. Thistlethwaite, J. R. McClelland, Isabella Harrison, William S. McCune, and Vincent M. Iovine. Dr. Walter H. Gerwig, a member of the Halsted Society, was moderator at the pre-luncheon session.

Dr. Brian Blades, also a member of the Halsted Society, was moderator at the afternoon session, when papers were presented by members of the Society.

On Friday, May 4, the morning program was presented at the National Naval Medical Center in Bethesda. Dr. J. W. Peabody, Jr., gave one of the papers, which was entitled "Problems in the Diagnosis and Classification of Mediastinal Tumors." The afternoon session was held at the National Institutes of Health. The Walter Reed Army Medical Center was host to members of the Society on Saturday morning.

At an informal dinner at the National Press Club, April 27, the **Mid-Atlantic Chapter of the American Medical Writers' Association** was organized. The new officers are: Dr. I. Phillips Frohman, President; Dr. Robert P. Oldenwald, Vice President; Mrs. F. A. Cooksley, Secretary; and Dr. W. Calhoun Stirling, Treasurer.

A program followed the dinner. Colonel Robert E. Bitner, Editor of *Military Medicine*, discussed "One Medical Editor's Problems." Mr. Dick Hoover and Mrs. Mary McIsaac, both of the Williams & Wilkins staff, Baltimore, presented some editing problems from the viewpoint of the publisher. Dr. Estelle Brodman, Chief of the Reference Division, Armed Forces Medical Library, enumerated facilities and services available through that institution.

Physicians interested in writing or in the encouragement of better medical writing are invited to join the Chapter.

The George Washington University Medical Society met, April 18, at the Medical School. Dr. Bernard H. Ostrow, Clinical Instructor in Medicine at George Washington, presented a paper on "Serum Transaminase (GOT) in the Detection of Acute Myocardial Infarction." The paper was discussed by another faculty member, Dr. John M. Evans, Associate Clinical Professor of Medicine.

The Jacobi Society held its regular dinner meeting, April 16, at the Willard Hotel, with Senator Richard L. Neuberger, of Oregon, as the guest speaker.

Georgetown Clinical Society elected the following officers at its meeting, April 17:

Dr. Raymond A. Osbourn, *President*; Dr. Philip Burka, *Vice President*; and Dr. Paul F. Jaquet, *Secretary-Treasurer*.

The William Beaumont Medical Society, a student honor society of George Washington University School of Medicine, held its Annual Banquet at the Ted Lewis Supper Club, May 1. Mr. Herbert L. Kotz, President of the Society, presided at the program which followed the dinner. Dr. John M. Evans, Associate Clinical Professor of Medicine, gave the principal address on "Cardiac Emergencies."

Dr. Calvin T. Klopp, Assistant Clinical Professor of Surgery and Director of the Cancer Clinic, who is adviser for the Society, presented the Klopp Trophy to Mr. Ray A. Olsson for the outstanding paper presented before the Society during the year.

To encourage higher standards in medical research and writing, Pfizer Laboratories contributed $100 to be used as awards for the three best papers presented during the year. A. Louise Eckburg, Assistant Editor of the MEDICAL ANNALS, was asked to select the winning papers and to present the awards. Recipients of awards were Mr. Olsson, Miss Randi V. Rosvoll, and Mr. Oscar I. Dodek, Jr.

GENERAL NEWS

At the regular meeting of the **Executive Board of the Medical Society of the District of Columbia,** April 23, President Morris submitted a list of appointments to two new committees, which were approved by the Board. The following members of the Society were appointed to a special Committee on Hospitals, authorized by the Executive Board, January 23: Dr. Hugh H. Hussey, Chairman; Drs. W. Dabney Jarman, Raymond T. Holden, Robert J. Coffey, William F. Burdick, and William S. McCune.

Appointed to a Study Commission on Reorganization of the Medical Society were: Dr. William P. Herbst, Jr., Chairman; Drs. A. Magruder MacDonald, Herbert S. Gates, O. H. Fulcher, Raymond T. Holden, Robert J. Coffey, and Brian Blades.

The Armed Forces Medical Library is presently making a special effort to add to its large portrait collections the photographs of faculty members holding the ranks of professor and associate professor in American medical schools. The criterion of selection for this particular program was established because it was felt that the professional group embraces a large segment of the American medical community making significant contributions to medical science.

The Art Section, which now contains 26,000 portraits of medical men of the last 400 years, is constantly in use by journals, newspapers, exhibitors, and the motion picture and television industries.

By the end of May, all schools will have been solicited for photographs of faculty members. This item is published only to reëmphasize the importance of a coöperative response.

The Board of Directors of Emergency Hospital, following its annual meeting, April 27, announced some new appointments which will interest Medical Society members.

Dr. Crenshaw D. Briggs was appointed Chief of the Surgical Department, succeeding Dr. John Hugh Lyons, and Dr. Theodore J. Abernethy was appointed Chief of the Medical Department, succeeding Dr. John Minor. Dr. Lyons and Dr. Minor have been synonymous with surgery and medicine at Emergency for many years. They were named Emeritus Chief and Senior Consultant of the Departments of Surgery and Medicine, respectively.

The medical staff elected the following officers: Dr. John A. Reisinger, President; Dr. Walter A. Atkinson, First Vice President; Dr. R. Bretney

Miller, Second Vice President; and Dr. E. Herbert Bauersfeld, Secretary.

The Medical Education for National Defense Committee of Georgetown University School of Medicine staged a mock disaster on April 25. The authorities of the University Hospital were forewarned that they would be confronted with an unknown but large number of casualties at some time during a specified 2-week period.

The sophomore medical students, numbering 97 in all, constituted the casualty list. They were decorated with skin marking pencils to depict their injuries, using a color scheme previously made known to the Hospital staff. Two classes of students from the Nursing School were utilized as anxious relatives of the injured. Each of these girls was given the name of a casualty and charged with the task of obtaining information about his condition, location, etc. Half of the girls were instructed to phone the Hospital and half were dispatched directly to the Hospital.

Maintaining the element of surprise, a phone call was placed to the Hospital at 8:25 p.m. on the fourth day of the stipulated 2-week period, announcing that Operation Hoya was in effect. It was further announced that a boiler had exploded in the University gymnasium during a basketball game and that a large number of casualties had resulted. The transportation problem was deliberately by-passed and the casualties began appearing at the Hospital 15 minutes later.

The "disaster" was staged under the direction of Dr. James E. Fitzgerald, Georgetown Coördinator of Medical Education for National Defense, and Dr. Hugh H. Hussey, Professor of Preventive Medicine and Public Health.

Hahnemann Hospital, at 135 New York Avenue, N.W., a Washington institution for 75 years, will be combined with the new **Sibley Hospital,** which is to be built on the American University Campus. The announcement was made at a luncheon at the Willard Hotel, April 18, given by the trustees of the Sibley Hospital.

Announcement was also made of a drive to raise 1½ million dollars to add to present assets of about this amount. With a Federal matching grant of 3 million dollars, the new structure can be built. Estimates have been made that the Hahnemann plant of 60 beds is worth about $500,000.

Dr. Wyrth P. Baker is Chief of the Hahnemann medical staff, which numbers about 100 physicians. The Sibley staff consists of 375 physicians with courtesy privileges. Dr. John M. Orem is the Medical Director.

The Davis Memorial Goodwill Industries held brief dedication ceremonies at its new **Rehabilitation Center** at 1229 20th Street, N.W., May 9. Mrs. Dwight D. Eisenhower officially opened the Center when she cut the ribbon across the entrance. A Federal grant of $92,500, extended through the Office of Vocational Rehabilitation, Department of HEW, has made the new Center possible.

Dr. Charles D. Shields, an Active member of the District Medical Society, is Chairman of the Center's Advisory Committee. Other doctors on this Committee include Drs. Josephine J. Buchanan, Paul B. Cornely, Daniel L. Seckinger, Joseph W. Stein, Charles S. Wise, and Bernard J. Michela. Dr. Michela is Medical Director of the Center.

Dr. B. Dixon Holland is the newly appointed Secretary of the **AMA's Council on Industrial Health.** He succeeds Dr. Carl M. Peterson, who died, September 27, 1955, of injuries received in an airplane crash.

Dr. Holland is retiring as Colonel in the U. S. Army Medical Corps. A native of Denton, Texas, he graduated from the University of Texas Medical School, Galveston, in 1934. He is presently serving as Medical Director of the Army Federal Civilian Employees' Health Service and Chief of Preventive Medicine and Assistant Surgeon at the Aberdeen Proving Ground, Maryland.

Dr. William B. Tucker has been appointed **Director of the Tuberculosis Service** in the Department of Medicine and Surgery of the **Veterans Administration.** He will suceed Dr. John B. Barnwell, who was recently appointed Assistant Chief Medical Director for Research and Education in the VA Department of Medicine and Surgery in Washington.

Dr. Tucker will take up his new work on September 1. He is presently Chief of Medical Service at the

VA Hospital in Durham, N. C., and Professor of Medicine at Duke University. He graduated in 1934 from the University of Chicago School of Medicine.

Two new medical journals from widely separated points of origin have made their appearance in the last few months. The first issue of the *South African Practitioner*, published by the South African Medical Publications, Ltd., appeared in December, 1955. Its editorial offices are located in Johannesburg. The editor is Dr. Ben Cohen; the advisory editors are staff members of the University of Witwatersrand.

The *German Medical Monthly* will be an English language edition of the *Deutsche medizinische Wochenschrift*, which has been the leading weekly medical journal of the German-speaking countries and now in its eighty-first year. The first issue (January, 1956), published in Stuttgart, Germany, bears the title, *German Medical Journal*, but beginning with the February issue the title of the publication will be *German Medical Monthly*. The new publication will follow the policy of the *Deutsche medizinische Wochenschrift* in having its pages open at all times to any contributor no matter what his country or origin. The Editor is Dr. G. R. Graham, of London.

PERSONALS

Dr. Wallace M. Yater, Chairman of the Executive Board of the Medical Society of the District of Columbia, was elected **Secretary General of the American College of Physicians** at its Annual Meeting in Los Angeles, California, April 20. Dr. Yater has served both as Governor and Regent of the College.

Dr. Yater

Dr. Yater is Director of the Yater Clinic, which was opened in 1947. He is Past President of the Medical Society and has been editor of the MEDICAL ANNALS since its inception in 1931. Known throughout the country as a leading medical educator, Dr. Yater was Professor and Director of the Department of Medicine at Georgetown University for 15 years; at the same time he headed the Department of Medicine at Georgetown Hospital and District of Columbia General Hospital. He is author of "Fundamentals of Internal Medicine," a textbook widely used in medical schools of the United States and Canada.

Dr. Daniel L. Borden has just been elected to the Board of Trustees of George Washington University. An alumnus, and a member of the University's medical staff since 1912, he was for many years Professor and Head of its Department of Surgery; in 1953 he was made Professor Emeritus of Surgery.

Also in 1953, Dr. Borden received the Certificate of Merit from the George Washington University Medical Society, which he has served as President. He is also Past President of the District Medical Society, the General Alumni Association of George Washington, and the Washington Academy of Surgery.

Dr. Borden

Dr. Henry L. Darner was awarded the honorary degree of Doctor of Science by Western Maryland College at its commencement exercises in Westminster, Md., June 4. Dr. Darner is Clinical Professor of Obstetrics and Gynecology at George Washington University School of Medicine.

Dr. Darner received his medical degree from Johns Hopkins University in 1920 and spent the following four years at Johns Hopkins Hospital as intern and resident in gynecology. After spending a year abroad in graduate study, he returned to Washington. He is Chief Gynecologist at Emergency Hospital and Senior Attending Gynecologist at Garfield Memorial Hospital. He has been a member of the Board of Trustees of Medical Service of D. C. for many years.

Dr. Jacob J. Weinstein, Associate in Surgery, George Washington University School of Medicine, was chosen **President-elect of the International Academy of Proctology,** which met at the Drake Hotel in Chicago, April 23–25. He will be installed as President of the Academy at its next annual meeting in New York City in April, 1957.

Dr. Leonard A. Scheele was sworn in, April 16, for his third term of office as Surgeon General of the United States Public Health Service.

Dr. Harry Lee Claud was invited to address the Centennial Annual Meeting of the Mississippi State Medical Association in Jackson, May 10. Dr. Claud, who is President of the Washington Academy of Surgery, spoke on "Surgery of the Biliary Tract."

The Washington Hearing Society sponsored free hearing tests, exhibits and consultations on May 8 and 9, during National Hearing Week, in the auditorium of the Perpetual Building Association. **Drs. Irvin Hantman, Morris Krucoff, and Allan E. Walker** assisted in the consultations on May 9. Dr. Hantman related some of the causes of hearing loss as told by parents and interpreted by the otolaryngologist. The medical treatment of hearing loss was described by Dr. Walker, who directs the Hearing and Speech Clinic at Children's Hospital. Dr. Krucoff, of the D. C. Department of Public Health, discussed infection and prenatal care in relation to hearing loss.

Dr. Edward D. Freis, Adjunct Clinical Professor of Medicine, Geortetown University School of Medicine, attended and took part in the 175th Anniversary of the Massachusetts Medical Society, held at the Hotel Statler, Boston, May 22–24. At the first general session, May 22, Dr. Freis, who is an Associate member of the District Medical Society, was moderator of a Panel Discussion on Current Status of the Treatment of Hypertension. Before the Section on Medicine the same day, Dr. Freis presented a paper entitled, "A Technic for Administering the Antihypertensive Drugs."

Dr. Ellis April has been appointed a consultant to the Council on Pharmacology and Chemistry of the American Medical Association. An allergist, Dr. April is on the staff of Georgetown University School of Medicine.

Dr. Charles P. Cake, of Arlington, Va., an Associate member of the District Medical Society, received the annual Douglas Southall Freeman Award at the Annual Meeting of the Virginia Tuberculosis Association, May 1. Dr. Cake was recognized for his outstanding efforts in tuberculosis control. He is Chief of the Tuberculosis Division of the Veterans Benefit Office in Washington and President of the Southern Tuberculosis Conference.

Dr. Richard L. Meiling, an Honorary member of the District Medical Society, was elected **President of the Ohio State Medical Association,** April 12, the closing date of its 108th Annual Meeting in Cleveland.

Dr. Meiling served on the AMA Committee on National Emergency Medical Service, which was organized in 1945. It was made a Council at the Atlantic City meeting of the AMA in 1947, and Dr. Meiling became its first Secretary and has served as a member ever since. He is Chairman of the Council's Committee on Military Medical Affairs. In addition to his practice in Columbus, Dr. Meiling is Associate Dean of the Ohio State University College of Medicine, where he is also Professor of Obstetrics and Gynecology.

Dr. Benedict J. Duffy, Jr., Director of the Isotope Laboratory and Assistant Professor of Medicine, Georgetown University School of Medicine, was president at the Hawaiian Centennial Medical Meeting in Honolulu, April 24. He read a paper on "The Chronic Effects of Radiation."

Dr. Robert J. Coffey, Professor and Director of Surgery, **and Dr. Charles A. Hufnagel,** Professor of Experimental Surgery, and Director of the Surgical Experimental Laboratory, both of Georgetown University School of Medicine, have been elected to membership in the American Surgical Association. Membership in the Association is limited to 250.

Dr. Joseph J. Mundell, Emeritus Professor of Obstetrics and Gynecology of Georgetown University School of Medicine, was guest speaker at the banquet of the Georgetown University Chapter of Alpha Omega Alpha, May 3, at the Officers' Club in Bethesda. Honorary membership was conferred upon **Dr. Willy Edward Baensch,** Professor of

Radiology. Forty alumni and students were inducted into membership in the honor medical fraternity.

Dr. Watson W. Eldridge has announced his plans to retire from his post at St. Elizabeths Hospital after a service of 36 years. In the fall he will go with Mrs. Eldridge to Deerfield Beach, Florida, located between Miami and Palm Beach, where he is building a new home.

Dr. Eldridge

Dr. Eldridge received his medical training at George Washington University School of Medicine, graduating in 1910. He was persuaded in 1920 by the late Dr. William A. White, then Superintendent of St. Elizabeths, to operate a general medical hospital within the mental institution. Under his direction St. Elizabeths became the first mental hospital accredited by the Joint Commission on Hospital Accreditation for internships in 1925. Since 1950 the Hospital has been accredited for resident training in surgery and neurology.

Dr. Eldridge taught medical jurisprudence at George Washington University School of Medicine for 30 years, retiring from the faculty 3 years ago. He is a member of the Board of Directors of Hospital Service Agency and has served in this capacity for the past 20 years.

Dr. Peter D. Comanduras, Associate Clinical Professor of Medicine at George Washington University School of Medicine, was appointed a Fellow of the China Medical Board for the study of tropical medicine and parasitology during April and May at the University of Puerto Rico Medical School and School of Tropical Medicine. In addition to field trips and study of the tropical diseases in Puerto Rico, visits were made to the Dominican Republic, as well as to Haiti and Cuba.

Dr. James A. Gannon, Sr. is broadcasting daily over WTOP in a question-and-answer radio series entitled "Tell Me, Doctor." The program, which goes on the air at 3:30 p.m. five days a week, began April 1 and will continue indefinitely.

Dr. Jed W. Pearson, of the Department of Obstetrics and Gynecology, George Washington University School of Medicine, participated in a Panel Discussion on Education for Marriage in Your Community at the 36th Annual Meeting of the Planned Parenthood Federation of America, held at the Waldorf-Astoria Hotel in New York, May 1–3. Dr. Pearson discussed the physician's role in preparing young couples for marriage. The panel was moderated by Dr. Alan Guttmacher, Director of Obstetrics and Gynecology at Mt. Sinai Hospital.

Mrs. Maurice A. Selinger, wife of Dr. Selinger, was elected, May 2, to the National Board of Directors of the Federation. Mrs. Selinger, a registered nurse, has been active in the Planned Parenthood Association of the District of Columbia since 1945. She founded its Garfield Hospital Branch Clinic in 1946 and has been Chairman of the Clinic since then.

Dr. William F. Burdick and Dr. Allan B. Coleman were among the speakers at Washington's Seventh Annual Health, Welfare and Recreation Conference, sponsored by United Community Services at the Hotel Statler, May 11. Simultaneous sessions were held throughout the morning and afternoon. Dr. Burdick, who is Chief of Staff of Children's Hospital, and Dr. Coleman, of the Public Health Committee of the D. C. Medical Society, participated in the session on "Medical Advances Save Children's Lives." The third speaker was Dr. Robert H. Felix, Director of the National Institute of Mental Health. Judge Luther W. Youngdahl, of the U. S. District Court for the District of Columbia, was Chairman of this year's Conference. The luncheon speaker was Marshall Field, President and Director of Field Enterprises and President of the Child Welfare League of America.

Two members of the District Medical Society took part in the Round Table Luncheons at the 22nd Annual Meeting of the American College of Chest Physicians, held at the Hotel Sherman, Chicago, June 7–10. On June 8 **Dr. Sol Katz,** Adjunct Clinical Professor of Medicine, Georgetown and George Washington University Schools of Medicine, was one of three participants in a luncheon discussion on "Pulmonary Disease: Nonspecific Infections," moderated by Dr. Alfred Goldman, Associate Professor of Clinical Medicine, Washington University School of Medicine in St. Louis.

The following day, June 9, **Dr. Edgar W. Davis,** Professor of Thoracic Surgery, Georgetown University School of Medicine, participated in a luncheon discussion on "Thoracic Surgery: Bronchogenic Carcinoma." The moderator for the latter meeting was Dr. Jerome R. Head, Assistant Professor of Surgery, Northwestern University Medical School.

Dr. Herbert P. Ramsey addressed members and guests of the medical staff of the Warren Memorial Hospital in Front Royal, Virginia, May 8. Dr. Ramsey selected for his talk the intriguing subject, "Gynecological Trials of a City Slicker."

Dr. Bernard H. Ostrow, of George Washington University School of Medicine, presented an exhibit on "Serum Glutamic—Oxaloacetic Transaminase in Myocardial Infarction" at the Fourth Biennial Cardiovascular Seminar in Miami Beach, Fla., May 9–12. Contributors to the exhibit were Dr. Daniel Steinberg, of the National Institutes of Health; Dr. Howard E. Tickton; and Dr. John M. Evans, of the Department of Medicine at George Washington.

The exhibit will also be presented at the AMA Convention in Chicago in June.

Dr. R. Frank Jones, urologist at Howard University School of Medicine, reported recently on the birth of a true hermaphrodite at Freedmen's Hospital, who was corrected by operation. The case report was made at a meeting in St. Louis, May 1, of the Former Interns Association of the Homer G. Phillips Hospital. Dr. Jones was assisted in the case by **Dr. W. Lester Henry.** Both physicians are Active members of the District Medical Society.

Dr. Everett J. Gordon recently completed a postgraduate course in the study of prosthetics of the lower extremities. The course was given by the Engineering and Medical Divisions of New York University. Dr. Gordon is associated with the National Research Council for studies in prosthetics and heads the Orthopedic and Prosthetics Appliance Clinic for the Middle Atlantic Region for Veterans Administration.

Dr. Thomas McPherson Brown, Professor of Medicine, George Washington University School of Medicine, participated in the 190th Annual Meeting of the Medical Society of New Jersey at Haddon Hall in Atlantic City, May 12–16. Dr. Brown addressed the Scientific Session on Rheumatism, May 15, on "An Interpretation of the Basic Mechanism Which Would Explain the Signs, Symptoms, and Natural History of Rheumatoid Disease."

Another Washington participant at the New Jersey meeting was **Dr. Irving B. Brick,** Associate Professor of Medicine, Georgetown University School of Medicine, who appeared before the Scientific Session on Gastroenterology and Proctology, May 16, to discuss "The Modern Treatment of Portal Cirrhosis."

Dr. Winfred Overholser was reëlected President of the Washington Institute of Mental Hygiene at its annual meeting, April 5. He was also reëlected for a three-year period to the Board of Directors. **Dr. Edwin S. Kessler,** Executive Director of the Institute, presented his report at the meeting which was held at Hillcrest Center.

Dr. Irving B. Brick was advanced from Associate to Active membership in the Gastroenterology Association during its 57th Annual Meeting in Atlantic City, N. J., April 28.

Dr. Addison M. Duval, Assistant Superintendent of St. Elizabeths Hospital and Clinical Professor of Psychiatry of George Washington University School of Medicine, presented a report jointly with Dr. Emory F. Hodges, of Alexandria, Va., and Dr. C. Downing Tait, Jr., of New York, before the opening session of the 112th Annual Meeting of the Psychiatric Association, April 30, in Chicago. In their progress report the doctors recommended new treatment methods for children in situations which breed delinquency and the establishment of more treatment facilities. The report was part of a pilot program which the District Commissioners' Youth Council has set up to cope with juvenile delinquency in two elementary schools in a section of Washington which has had a high record of crime and delinquency.

Dr. John L. Parks, Professor of Obstetrics and Gynecology, George Washington University School of Medicine, was among the guest speakers at the 64th Annual Meeting of the Idaho State Medical Association at Sun Valley, June 17–20, where he inaugurated the W. A. Tall Memorial Lectures. Dr. Parks presented four papers at this meeting, embracing the following subjects: "X-ray Diagnosis in Pregnancy," "Management of Ovarian Tumors," "Feminology After Fifty," and "Urinary Incontinence in the Female."

Dr. Sol Katz, Chief of the Division of Pulmonary Diseases, D. C. General Hospital, was in St. Louis, Missouri, February 6–9, attending the Veterans Administration meeting. He addressed the meeting on "Diagnosis of Pleural Effusion."

In a Postgraduate Course in Medicine, sponsored by the University of North Carolina at Albemarle and Statesville, April 17 and 18, Dr. Katz presented two papers, one on "Mediastinal Tumors" and the other on "Methods in the Diagnosis of Pulmonary and Pleural Diseases."

Dr. Edgar W. Davis and Dr. J. Winthrop Peabody, Jr., attended the meeting of the American Association for Thoracic Surgery in Miami, Fla., May 7–10. Dr. Davis presented a paper, May 8, on "The Solitary Pulmonary Nodule—A Ten-Year Survey," which was co-authored by Dr. Peabody and Dr. Sol Katz.

Dr. Benjamin Manchester participated in the scientific program of the 76th Annual Meeting of the Louisiana State Medical Society, April 25. The title of a paper he read was "Adrenal Insufficiency in Shock of Myocardial Infarction." On the preceding day he presented the views of an internist in a Clinicopathologic Conference.

Dr. Reginald S. Lourie, of the Department of Psychiatry, Children's Hospital, has been elected President-elect of the American Orthopsychiatric Association.

The Washington Heart Association has awarded grants amounting to $16,600 to the following physicians: **Dr. John C. Rose,** Georgetown Hospital; **Dr. Frank A. Finnerty, Jr.,** of the Georgetown Division of D. C. General Hospital; and Dr. N. L. Lahiry, of Howard University School of Medicine. Drs. Finnerty and Rose are members of the District Medical Society.

Two resignations of Active members have been reported. **Dr. Daniel E. Mack,** formerly on the

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
April 14	Dr. George Maksim, Panelist	Importance of Health and Health Education in Schools and How Voluntary Agencies Can Help	D. C. Chapter, American Association for Health, Physical Education and Recreation
April 20	Dr. Lois I. Platt	Discussion of film, "Breast Self-examination"	Senior girls and mothers, Anacostia High School
April 25	Dr. T. Douglas Noble	The Problem of the Middle Years	Westmoreland Congregational Church
May 14	Dr. John P. Haberlin Dr. Earl B. Barnes	Symposium on Cancer of the Breast	Nurses in Metropolitan Area
May 22	Dr. Louis Goldstein	Anatomy, Physiology and Hygiene of the Female	Childhood Education Club, University of Maryland

staff of the Washington Clinic, is now engaged in the practice of obstetrics and gynecology at Windsor, Conn. His offices are in the Snelgrove Building.

Dr. James E. Swan has moved to California. His address is 1841 Virginia Road, Los Angeles 19.

WOMAN'S AUXILIARY NOTES

The Annual Spring Luncheon brought to a close a most successful and profitable year under the guidance of Mrs. Lawrence A. Rapee. Aided by bright, beautiful weather, 110 members and guests met at the Columbia Country Club to honor a group of 10 Past Presidents of our Auxiliary who were able to be present. They were Mmes. William M. Ballinger, Daniel L. Borden, Caryl Burbank, Richard E. Dunkley, Ernest E. Hadley, William P. Herbst, Jr., A. Magruder MacDonald, Robert E. Moran, Duane C. Richtmeyer, and Richard H. Todd.

Innovations during the year were the *Newsletter*, an outstanding success under the guidance of Mrs. Joseph M. Rom, and the Theatre Benefit, one of the projects of the Ways and Means Committee, which netted about $1,400 for the Nursing Scholarship Fund and the American Medical Education Fund. The *Newsletter* will be continued, and everyone is already looking forward to the *next* Theatre Benefit!

Gracing the stage in the Medical Society's auditorium is the handsome new flag which the Auxiliary presented to the Society on President's Night. An order has already been placed for new and beautiful curtains, to be in place at the windows of the Library at our opening meeting next October.

Mrs. Howard A. Donald's Program Committee started off the year with a fashion show and kept the Library filled on meeting days with such outstanding speakers as Mr. Bryson Rash, Congressman John J. Rhodes, Dr. Harry Segal, and Dr. Calvin T. Klopp—and every meeting was climaxed by a delicious buffet luncheon planned by Mrs. James P. Murphy and her House Committee. During the year the outside social activities included swimming lessons and a self-improvement course, plus the ever-popular bowling. The Card Party Luncheon and Annual Spring Dance were both delightful and successful events. Cheers to our Ways and Means Chairman, Mrs. George W. Ware, and to our Social Chairman, Mrs. Leonard T. Peterson!

All during the year the officers and the Executive Board were kept busy conducting the business of the Auxiliary, such as the budget, the philanthropic projects, the record-keeping, the correspondence, and so on, all so important to a well-run, large and successful organization.

Mrs. Rapee has appointed the following members to serve as delegates to the national meeting in Chicago on June 11: Mmes. Edgar E. Quayle, Jonathan M. Williams, Albert E. Marland, Sr., and I. Phillips Frohman. Mrs. Rapee will be serving on the Election Committee. This "reporter's" next item will be date-lined "Chicago, Illinois"—see you there!

MRS. I. PHILLIPS FROHMAN
Publicity Chairman

CORRESPONDENCE

NEW YORK, N. Y., April 24, 1956

TO PRESIDENT MORRIS:

May I take this opportunity to express thanks from the National Foundation for Infantile Paralysis to the Medical Society of District of Columbia as a whole and to its individual members for their excellent coöperation with the District Health Department and the National Foundation in the successful conduct of the poliomyelitis vaccine demonstration program in the District of Columbia during 1955.

The chief beneficiaries of this program, of course, were the District of Columbia school children, mainly in the first and second grades, who received 1 or more injections of vaccine supplied by the National Foundation during the year 1955. A total of 54,261 c.c. of vaccine was supplied.

You may be interested to know that, thanks to your help, 26,097 District of Columbia children received at least 1 inoculation; and 19,913 received 2 inoculations up to November 18, 1955.

Approximately 39 per cent of the District of Columbia children in the 5 to 9 age group, the age group most susceptible to paralytic poliomyelitis, thus obtained a high degree of protection against the disease in 1955 as a result of this program.

The coöperation of the Medical Society of the District of Columbia helped materially to account for this fine record.

While this is a formal expression of gratitude for your help, the real expression must come from the parents of those many children in the District of Columbia who feel free from the threat of paralytic poliomyelitis in their families now that the 1956 poliomyelitis season is at hand.

Very cordially yours,
Hart E. Van Riper, M.D.
Medical Director, The National Foundation for Infantile Paralysis, Inc.

EMIL J. C. HILDENBRAND, B.S., M.D., F.A.C.S.

(1905-1956)

Dr. Emil J. C. Hildenbrand, well known Washington surgeon and Medical Director of the Potomac Electric Power Company, died unexpectedly at University Hospital in Baltimore, April 16, 1956.

Dr. Hildenbrand was born in Clay Center, Kansas, February 15, 1905, to the late John Henry Hildenbrand and Mrs. Lena Hildenbrand, who survives him. The family moved to East New Market, Maryland, when Dr. Hildenbrand was a young boy; he grew up on the Eastern Shore of Maryland and obtained his early schooling there. He graduated from Washington College in Chestertown, Maryland, in 1926, receiving the degree of Bachelor of Science. He received his medical education at the University of Maryland in Baltimore, graduating in 1930. After a year's internship at the U. S. Marine Hospital in Baltimore, he was a resident in surgery at the University Hospital, also in Baltimore, from 1931 to 1934.

At the beginning of his practice of general surgery in Washington in 1935, he founded and headed the Department of Physical Therapy at Garfield Memorial Hospital. The same year he became Associate Medical Director of the Potomac Electric Power Company, which position he held until 1946, when he was named Medical Director. He was also surgeon in the D. C. area for the Baltimore and Ohio Railroad.

Dr. Hildenbrand was Associate Professor of Clinical Surgery at Georgetown University and in charge of the Tumor Clinic and Neuro-circulatory Clinic at Georgetown Hospital.

He was the first surgeon in Washington to use refrigeration as an anesthetic for amputation and treatment of vascular diseases. This was in 1941. He published two papers in connection with refrigeration as an anesthetic.

In 1945 he went to Boston to study the surgical approach in hypertension with Dr. R. H. Smithwick.

Since his election to Active membership in the Medical Society of the District of Columbia in 1935, he has served on a number of committees and for the past year was Chairman of the House Committee. He was a fellow of the American College of Surgeons, the International College of Surgeons, and the Industrial Medical Association; a member of the American Medical Association, the Southern Medical Association, and the Washington Academy of Surgery, among others. At the time of his death, he was President of the Medical Arts Society. In 1949 he received the Frank E. Gibson Award from the Washington Medical and Surgical Society, and in 1954-55 he was President of the latter Society.

He was a member of the Board of Advisors and Governors of Washington College, Chestertown, Maryland, of which he was an alumnus. He was a member of the National Press Club and Nu Sigma Nu Fraternity.

Surviving him are his wife, Mrs. Ada Conklin Hildenbrand and four children: Carolyn Jane, a student at Skidmore College, and John, Frederic and Mari Martha, living at their home at 4201 Fessenden Street, N.W. His mother still resides at East New Market, Maryland. He also leaves a sister, Mrs. Frieda Wode, of Washington.

Functioning Carcinoid Tumor—Mattingly

(Continued from page 312)

BIBLIOGRAPHY

61. Pernow, B., and Waldenström, J.: Paroxysmal flushing and other symptoms caused by 5-hydroxytryptamine and histamine in patients with malignant tumors. Lancet, 1954, **2**, 951.
62. Spain, D. M.: Association of gastrointestinal carcinoid tumor with cardiovascular abnormalities. Am. J. Med., 1955, **19**, 366.
63. Stoll, W. A.: Lysergsäure-diäthylamid, ein Phantastikum aus der Mutterkorngruppe. Schweiz. Arch. f. Neurol. u. Psychiat., 1947, **60**, 279; quoted by Sjoerdsma et al.[15]
64. Rosen, S. (A.F.I.P.): Personal communication.
65. Humphreys, E. M.: Carcinoid tumors of small intestine; report of 3 cases with metastases. Am. J. Cancer, 1934, **22**, 765.
66. Foreman, R. C.: Carcinoid tumors; report of 38 cases. Ann. Surg., 1952, **136**, 838.
67. Bailey, O. T.: Argentaffinomas of gastrointestinal tract,

benign and malignant. A.M.A. Arch. Path., 1934, **18**, 843.
68. Brown, C. H., Bissonnette, R. P., and Steele, H. H.: Argentaffine tumors of gastrointestinal tract; report of 11 cases. Gastroenterology, 1949, **12**, 225.
69. Woolley, D. W., and Shaw, E.: Antiserotonin which is active when fed. J. Pharmacol. & Exper. Therap., 1953, **108**, 87.
70. Zollinger, R. M., and Ellison, E. H.: Primary peptic ulcerations of jejunum associated with islet cell tumors of the pancreas. Ann. Surg., 1955, **142**, 709.

Osteotomies in Chondrodystrophic Dwarf—Herzmark

(*Continued from page 317*)

from pain and straight, stable knees and legs. If this could be accomplished, he was prepared to spend the necessary time and money, and assume the risk.

A month after the initial examination he was admitted to the hospital. A curved osteotomy was done on the right femur, and the fragments held together with a bone-plate. A plaster of Paris spica was applied to immobilize the hip and knee, correcting the genu valgum as much as possible. A week later, a curved osteotomy was done on the left hip in similar manner and a bone-plate applied, and now a double plaster spica was employed in order to correct the deformities as much as possible with the plaster (figure 3—A and B). Postoperative care consisted of reapplication of plaster when indicated, the fitting of a brace for the right lower extremity, and the use of a walker for exercising the limbs. At the end of 4 months from the beginning of the procedures the patient was able to walk quite well with the aid of a long leg brace on the right side to aid in stabilizing the right knee, which had been the worse from the start. At the end of 6 months he was able to return to work. Before he left for New York, where he lives, he was informed that it would be necessary to return for a correction of the oblique position of the right knee joint if the brace failed to do it. At the end of a year he returned, and a wedge osteotomy was done at the lower end of the right femur, a wedge from the cortex being used to fill the gap with a bone-plate and plaster applied for immobilization (figure 3—C). When sufficient callus had formed the brace was reapplied and he was permitted to return to his home. After several months the brace was discarded, and he returned to his work at the airplane factory.

When recently seen (December 16, 1955) he walked quite well. His knees were stable, and the genu valgum was completely corrected (figure 4).

Tea—Frohman

(*Continued from page 324*)

6. Lawton, H. H.: Tea and the Human Factor Index. Washington, D. C.: Biological Sciences Foundation, in press.
7. Martinek, R. G., and Wolman, W.: Xanthines, tannins and sodium in coffee, tea, and cocoa. J.A.M.A., 1955, **158**, 1030.
8. Harrison, E. J.: Vitamins in tea. Bull. Coffee and Tea Industry, 1949, **72**, 67.
9. Halpenny, G. W., and MacDermot, H. E.: Effects of tea drinking. Canad. M. A. J., 1939, **41**, 449.
10. Mitchell, K., and Bernard, M. C.: Food in Health and Disease, 5th ed. Philadelphia: Davis, 1953.

Report of Executive Board

(*Continued from page 340*)

Medicine and Allied Subspecialties be created. This requires an amendment to the Constitution and By-laws and the above is offered for adoption.

Conclusion. As you have already been informed, the Annual Scientific Assembly for this year has been abandoned because the Southern Medical Association is holding its Golden Anniversary meeting in Washington, D. C. on November 12–15, 1956. The Society is coöperating with the Committee on Arrangements for the SMA meeting and, as agreed, has through its representatives completed the scientific program for the first day of the convention, which has been designated District of Columbia Day. Further details in regard to this meeting will be forwarded to each member of the Society shortly.

Undoubtedly there will be a business meeting of the Society in the early fall, perhaps in October. At that time the Board will report developments of interest to the membership which may have occurred during the summer.

Respectfully submitted,
Wallace M. Yater, M.D., *Chairman*
Ralph M. Caulk, M.D.
Karl C. Corley, M.D.
Hugh H. Hussey, M.D.
Preston A. McLendon, M.D.
W. Ross Morris, M.D.
Herbert P. Ramsey, M.D.
Theodore Wiprud, *Secretary*

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *July*, 1956 NUMBER 7

THE CLINICAL AND BIOCHEMICAL ASPECTS OF ALLERGY*

HARRY S. BERNTON, M.D., F.A.C.P.

Professor of Hygiene and Preventive Medicine Emeritus, Georgetown University School of Medicine

THE YEAR 1956 is an eventful one. It marks the fiftieth anniversary of the introduction of the term "allergy" to medical nomenclature by von Pirquet, an Austrian. The term denotes an "altered reactivity" or a hypersensitiveness in human beings to substances which in themselves are harmless. This state arises spontaneously in man, possibly as the result of hereditary influences. In contrast, the term "anaphylaxis" signifies reactions which ensue in the animal kingdom under experimental conditions and rarely in man.

Thus, Richet with Hericourt in 1898 and later with Portier in 1902 demonstrated a sensitiveness in dogs toward fluids of animal origin. They used eel serum and extracts of sea anemone. It was Richet who applied the term "anaphylaxis" to the strange phenomenon. The phenomenon was, indeed, a strange one. Proteins were injected into animals, and no deleterious results followed the first injection. A second injection of the same foreign substance caused instant death. A time interval or incubation period of several days had to elapse between the first injection—the sensitizing dose—and the second injection—the shocking dose. The term "anaphylaxis" connotes the inverse of protection and is the very antithesis of prophylaxis or the protection which subsequent injections are designed to afford.

The histopathologic changes in the allergic state are characterized by smooth muscle spasm, increased capillary permeability, extravasation of fluid into tissue, and an increase in mucous gland secretion.

At first, the list of allergic diseases was a restricted one. It included hay fever, asthma, eczema and hives. With the increasing interest in allergy, additions were gradually made to this list. A critical review of the literature reveals that the following are some of the conditions which are classified as allergic or potentially allergic: perennial hay fever, vasomotor rhinitis, nasal polyps, contact dermatitis, angioneurotic edema, certain types of migraine and neuralgia, epilepsy, certain forms of toxemia, urogenital conditions, as bladder, renal and ureteral pain, arthritis, some cardiovascular disturbances, gastrointestinal manifestations, as anorexia, canker sores, pain, vomiting, colitis, proctitis, and pruritus ani, and sensitiveness to drugs and antibiotics.

---

* The Kober Lecture for 1956, delivered at Georgetown University School of Medicine, March 21, 1956.

The mechanism involved in a majority of these clinical reactions may be explained by the explosive union of antigen with its specific antibody. Dale and his school have presented evidence that the union results in the liberation of histamine from the intracellular to the extracellular spaces. Histamine, it will be noted, is one of a group of tissue hormones which are powerful vasodilators. It is, indeed, noteworthy that some of the allergic reactions are of acute onset and transitory, leaving no pathologic changes, as the wheals in urticaria, an acute hay fever or asthmatic attack, or the severe itching from an ingested food. Other reactions are slow in development and give rise to permanent lesions, as periarteritis or the Arthus phenomenon.

The incidence of allergy assumes importance in medical teaching and practice. Not only is the increasing number of clinical allergies of significance, but also the number of individuals affected. Piness and Miller, in an unusual opportunity of studying an entire community, found that 10 per cent of the population showed some form of allergy. This percentage has been accepted as a standard. Rowe, in a study of a college population, reported a higher percentage, that of 35; whereas Vaughan, in a like survey of a community, ascribed "minor allergies" to 50 per cent. This author ventured the prediction that 100 per cent of the population might develop minor allergies at some time during their life. The assumption has been made that the allergic response to foreign reagents is almost a normal physiologic function and may, therefore, involve an entire population if it were to live long enough. Because of the strides made by preventive medicine, there has been a notable increase in the expectation of life. The median age of the population, which was 22.9 years in 1900, is now 30.8 years. The question naturally arises whether or not the allergic syndrome will prove to be the culmination of the longer and more abundant life.

The hereditary factor in allergy is even more impressive. The assembled data of many authors indicated that a positive family history among normal non-allergic persons, chiefly college students, averaged 6.4 per cent, whereas a positive family history in asthmatic and hay fever patients averaged 51.3 per cent. This striking difference stresses the importance of heredity in the role of transmission. Other controlling factors need well be cited. The incidence of allergic conditions is greater in individuals with a positive bilateral family history than in those with only 1 positive antecedent line or with a bilateral negative family history. Moreover, the age of onset of symptoms is much earlier in children with a positive bilateral family history than in those with a unilateral or negative inheritance.

Bray has called attention to the influence of sex in the transmission of the allergic predisposition. He has noted that this transmission occurs twice as frequently through the mother as through the father and that twice as many of the offspring are prone to be affected when the mother is allergic.

Accordingly, 3 facts, (1) the incidence of allergic phenomena, (2) the tendency toward transmission of the allergic constitution from parent to offspring as a Mendelian dominant, and (3) the increasing population of the United States, invite concerted action in meeting the challenge presented. The need for basic research which will reveal the creative forces of the allergic state has long been recognized. The recent formation of the American Foundation for Allergic Diseases, sponsored by the allergists of the country, is evidence of this recognition. Moreover, the inclusion of allergy in the Institute of Infectious Diseases of the National Institutes of Health of the United States Public Health Service merits our thanks and support. It augurs well.

The designation, "antigen" or "allergen," is applied to the substance which is capable of producing allergic reactions in sensitive individuals. Allergens are divided into 4 main groups, according to their mode of entry.

1. Inhalants. These are inhaled with the inspired air, such as animal danders, pollens, molds and organic dusts.
2. Ingestants. These include all foods and drugs which are absorbed from the gastrointestinal tract.
3. Contactants, such as the toxin of poison ivy and various dyes and chemicals which act directly upon the skin.
4. Injectants, comprising immune sera, certain forms of drugs, and the sting of insects which penetrate the integument.

The early investigations of Dunbar, Kammann, Wolff-Eisner and Heyl indicated that the protein was the active constituent of pollen grains. This observation stimulated the study of the role of the various protein fractions. Interestingly enough, Caulfield in 1925 made a report on "Skin Tests on Hay Fever Cases with Chemically Different Fractions from Ragweed Pollen." The report appeared simultaneously with one by Czonka, Bernton and Jones on the isolation of chemically different fractions from timothy and orchard grass pollens, and in 1927 these authors presented the following summary:

1. Four active proteins have been isolated from timothy pollen. These are designated proteose A, proteose B, albumin and glutelin.
2. Sixty-three per cent of vernal, hay fever subjects show a cutaneous sensitiveness to 2 or more proteins. Twenty-one per cent are sensitive only to proteose A fraction and 15 per cent only to albumin.
3. The albumin constitutes one-ninth of the total extractable protein content.
4. The glutelin is of negligible importance.

An outstanding publication by John M. Newell of Boston, entitled "A Review of Chemical Studies on the Allergens in Pollen," appeared in 1942. The bibliography includes 147 references. In his summary the author makes the following assertions, in part:

> "The chemistry of the hay fever producing substance in pollens has been studied for about forty years. The sum of all this work is difficult to evaluate because of contradictory reports and lack of uniform methods for quantitative studies. . . . As yet, none of the active substances have been isolated in pure form in large enough quantities to permit a thorough chemical examination, so that their constitution is still not known exactly."

Furthermore, Newell in his paper under the heading of "Active Proteins" states:

> "The protein nature of the active material of pollen has had its strong supporters. . . . The chemists of the United States Department of Agriculture have made considerable study of the proteins of agricultural products, especially cottonseed. The allergic phase of this work started by Jones and Czonka is still being carried on by Spies, Stevens and others in collaboration with Bernton and is mentioned here since the methods used may have a bearing on the study of pollens."

Accordingly, this is the opportune time to review briefly the contributions to allergy made by the Allergens Research Division of the United States Department of Agriculture. This Division was organized in 1936 under the Bankhead Jones Act. It has been my privilege to have been associated with this Division as its clinician since its inception. I dare not refrain from expressing my respect and admiration for the integrity, industry and enthusiasm of the members of the unit, Dr. Henry Stevens, Dr. Joseph R. Spies, Dr. E. Jack Coulson, and Mrs. Dorris Chambers. In May, 1949 the Secretary of Agriculture awarded a citation to our unit "for outstanding achievement in fundamental chemical and biological research on allergenic components of agricultural products."

Our work stresses the importance of the cooperation of the clinician, biochemist and immunologist in the solution of the many vexing and challenging problems of the day.

Cottonseed was primarily selected by our unit because of the availability of material and its recognized potency as an allergen. In 1925 Jones and Czonka first described methods for the isolation of the proteins of cottonseed, 5 in number. Their procedure involved successive extractions of the cottonseed with aqueous sodium chloride. Our unit supplemented the chemical analyses of Jones and Czonka by exploring the allergenic possibilities of the isolated fractions. Skin tests with 4 of the separated proteins and with 2 in combination, performed by us upon cottonseed-sensitive subjects, resulted in strongly positive reactions with no evidence of differentiation in activity.

As fractionation progressed it was soon recognized that the initial skin reactivity of the protein fractions was due to a contaminant. Accordingly the systematic alcohol-fractionation of the water-soluble constituents of cottonseed was undertaken. It is noteworthy that as a result of continuous experimentation very active and specific fractions, designated CS-1 and CS-1A, have been isolated in quantities sufficient for chemical analysis.

CS-1A represents approximately 1 per cent of the defatted cottonseed and contains 11.8 per cent nitrogen and 39.9 per cent polysaccharidic carbohydrate. By electrophoretic fractionation of CS-1A, a product, CS-51R, was obtained which contained 19.8 per cent nitrogen and only 0.9 per cent carbohydrate. Moreover, the high potency of the isolated fraction is manifested by the fact that the picrate of CS-1 induces positive reactions by intracutaneous injections of 0.01 c.c. of $1:10^8$ solution in passively sensitized sites.

A logical study was next initiated to ascertain whether the cottonseed allergen present in CS-1 or in the more highly purified picrate derivative, CS-5, represented the sole allergen or only 1 of several water-soluble allergens of the cottonseed embryo. The sera of 7 cottonseed patients were studied according to the technic described by Lippard and Schmidt. The results indicated the presence of multiple cottonseed reagins and of multiple cottonseed allergens. In confirmation, the investigation of the nature of the unidentified allergens of cottonseed was successfully carried out. Globulin fractions of cottonseed, prepared after prolonged purification, retained allergenic activity. Moreover, in the course of routine testing, 2 patients of extraordinary interest were encountered. They reacted positively when tested with whole cottonseed or unheated globulin preparations and negatively when tested with fraction CS-1A or CS-51R. Their blood reagins were likewise specific for the globulin fraction. Accordingly, the question of multiple allergens has been removed from the realm of probability to the realm of actuality.

The period of arduous chemical fractionation and clinical testing was followed by one of immunologic investigation in experimental animals. This was made necessary by the criticism that the fraction CS-1A and its modifications were derived proteins. The dissenting opinion was expressed that no native protein could survive the fractionation procedures and retain its chemical and physical properties. The following investigations of the antigenic properties of CS-1A showed that it retained all the characteristics of a native protein and that it appeared as such in the original cottonseed:

1. The fraction was capable of sensitizing guinea pigs.
2. The fraction was capable of shocking sensitized animals.
3. After recovery from anaphylactic shock, a condition of specific desensitization to the same antigen developed.
4. Passive sensitization was transmitted from rabbit to guinea pig and guinea pig to guinea pig.
5. By means of the Schultz-Dale technic it was possible to demonstrate the typical reactions of the non-striated muscle tissue of the sensitized animal to the specific antigen.
6. The CS-1A fractions produced precipitating antibodies in rabbit serum.

Thus, all the postulates of Wells for the characterization of native proteins were complied with.

The procedure which was developed independently for the isolation of the cottonseed allergen, CS-1A, was applied to the study of other oil seeds and nuts. These included, in part, almond, Brazil nut, castor bean, kapok and walnut.

It will be recalled that Heidelberger and Avery first noted the important role which carbohydrate played in the immunologic specificity of the pneumococcus. Accordingly, an essentially carbohydrate-free allergenic protein was isolated from fraction CB-1A from castor beans. Experiments revealed that this carbohydrate-free fraction exhibited the same antigenic specificity as CB-1A, and that it possessed a greatly diminished capacity to sensitize animals but that its capacity to shock sensitized animals remained unaltered. The suggestion has been made that sensitization and shock may be produced by different functional groupings in the antigenic molecule. One grouping may, therefore, be altered without causing change in the other, or the carbohydrate may simply increase the size of the molecule and thus enhance the sensitizing capacity.

A remarkable physical property of the allergenic protein fractions, CS-1 and CB-1, isolated from the cottonseed and castor bean respectively, is their resistance to heat. Thus CS-1, dissolved in water and autoclaved at 125° to 130° C for an hour, gave positive cutaneous tests in the dilution $1:10^5$.

Clinical evidence will now be presented to attest to the concept that the physicochemical characteristics of allergenic fractions not only vary from each other in different substances but vary from each other in the same substance. A patient was tested by the cutaneous method with an extract of celery. The reaction was strongly positive. The typical wheal with pseudopod formation was accompanied with considerable itching. The patient then exclaimed: "That is what happens on my lips when I eat raw celery. But I can eat cooked celery as in soups without any trouble." It is apparent that 1 allergen in celery is heat-labile in contradistinction to the heat-stable allergens CS-1 and CB-1. The classic observation of Prausnitz and Kustner in their work on passive transfer stands out in marked contrast. Kustner, it will be recalled, was fish-sensitive. Uncooked fish produced no allergenic disturbance in him, but fish when cooked and subjected to a temperature of 55° C became actively allergenic. In fact, cutaneous tests, positive with a boiled extract, provoked constitutional reactions.

By way of supplement, the case history of a male patient, aged 42, is cited. Ever since he was a boy of 7, he could not eat fish either in the raw or cooked state. Extensive angioneurotic edema developed within 5 to 10 minutes after ingestion. He could, however, eat canned salmon or canned tuna fish without any untoward symptoms.

It may, therefore, be concluded from the foregoing clinical experience that the multiple allergens in fish show a difference in susceptibility to temperature changes. Some are active in the fresh state, some are activated by a temperature of 55° C, and all are inactivated by the temperature of the canning process. Fish are cold-blooded animals and their temperature is determined by that of their environment. This varies from the icy waters of the Arctic to the warm waters of the Torrid Zone. The question naturally arises whether allergens in fish vary with, or conform to habitat.

The multiplicity of allergens and their variability in physicochemical behavior, as outlined above, have contributed to the difficulty of testing for protein sensitization, especially for food sensitiveness. Many investigators have stressed the variations in allergenic activity of food extracts. Moreover, the allergenic activity of such extracts seemed to bear no constant relationship to their nitrogen content.

Gay summarizes this important phase of the subject as follows: "Skin-testing, although valuable in inhalant allergy, is not a particularly reliable diagnostic method in food allergy, as there is a high percentage of false negative and false positive reactions."

Hitherto, aqueous solutions of salt, soda, and phenol have been employed in the preparation of food extracts for diagnostic purposes. The fact that the proteins of many different allergens may vary in their solubility in dilute and concentrated solutions of acids, alkalies, salts and alcohol has been disregarded. Stevens' observation is a timely one, viz.: "Routine extractions of . . . the different allergenic substances with one type of solvent are not more scientific than would be the attempt to recover all metals from ores of all types by one invariable process of smelting."

Happily, the methods elaborated by our unit make available allergenic fractions free from the many other complex organic constituents of the raw material. The ultimate significance of these biochemical contributions cannot be overestimated. Thus a pattern has been designed for the determination of sensitiveness in man by testing with potent and stable allergenic entities. Confusion and controversy will diminish. It will tend to terminate the conflict between the schools of thought which advocate the cutaneous and intracutaneous methods of testing, respectively. The contradictory results obtained with the use of extracts, prepared according to prevailing methods, will be eliminated, and the discrepancies in diagnoses made by allergists will no longer perplex patients.

No acceptable hypothesis has been advanced to date which will explain the cause or causes of human hypersensitiveness—allergy. The knowledge, however, of the chemical properties of the allergen may reveal the nature of the linkage between it and the tissue cells, which gives rise to clinical sensitization. Likewise, the loss of the combining power of tissue cells with the allergen may unfold the mechanism of the loss of susceptibility which occasionally occurs.

The identification and classification of vitamins and the synthesis of some of them have solved many of the problems of nutrition. This fact should lend encouragement to the biochemical attack upon the allergic disturbances from foods. When allergens are available in purified form, future investigators will be in a more strategic position not only to subject theories of the past to crucial test but also to formulate new concepts.

Cottonseed ranks high in importance as an agricultural item. It is used in the preparation of many products essential to industry and to the home. Its flour may be utilized as an adjuvant to wheat flour in making certain bakery products, pastries and confections. Far more extensive use, however, has been made of its derivative, cottonseed oil. The oil has found wide application both in commercial and domestic food articles.

It is of historical interest to note that in 1932 the Committee on Foods of the American Medical Association brought the attention of the Bureau of Chemistry to the alleged toxicity of cottonseed oil. The Committee was considering also a request that accepted foods containing cottonseed oil bear a warning label. The action of the Committee was based upon the information that a surgeon of national prominence suffered toxic reactions from the ingestion of such foods. Sensitivity to cottonseed oil was thus assumed. Bowman and Walzer made the following assertions in one of the early textbooks on allergy: "The active principle in cottonseed is probably a protein. . . . The oil of cottonseed contains active atopen and may therefore induce symptoms as an inhalant, ingestant, or contactant." A similar opinion has been voiced by Taub. A statement by Rowe, "I have . . . demonstrated cottonseed allergen in Wesson oil," was indeed startling. These observations have profoundly affected medical thought and practice. Accordingly, patients who were found sensitive to the extract of cottonseed meal were cautioned against the use of food products of which cottonseed oil was an ingredient. The culinary utilization of the oil embraces so many of our everyday articles of diet, of which shortening, salad dressing, potato chips, fried chicken, fried fish, canned sardines and tuna fish, bakery and candy products, and oleomargarine are familiar and tasty representatives. Both industry and the consuming public were equally disturbed, if not distressed.

The isolation of a protein allergenic fraction, CS-1, from the water-soluble constituents of cottonseed embryo, to which reference has previously been made, enabled our unit to attack the problem of the alleged allergenicity of cottonseed oil. A series of experiments were performed which justified the conclusion that the specific and exceedingly potent water-soluble allergen of the cottonseed embryo did not occur in refined cottonseed oil. In these studies, patients highly sensitive to the cottonseed allergen, CS-1, gave negative reactions to the refined edible cottonseed oil on contact with the skin, on ingestion, and on instillation into the conjunctival sac and upper respiratory tract. Cottonseed oil, in doses of 2 to 3 tablespoonfuls daily, was prescribed for 5 patients. In addition, 3 patients were given saline crackers spread with a heaping tablespoonful of the hydrogenated cottonseed oil. One patient was provided with a 1-pound can of the hydrogenated oil, which was used liberally as a substitute for butter. The absence of ill effects in these persons was striking. Finally, 8 normal individuals received a single sensitizing injection of cottonseed serum in a skin site on the upper arm. Six of the 8 skin areas exhibited no detectable response following ingestion of cottonseed oil but reacted positively to the orally administered cottonseed allergen derived from the seed itself. The remaining 2 sites were negative. The attempt was also made to detect the presence of the cottonseed allergen in the refined oil by chemical means. The result was negative.

A dissenting voice was raised by a distinguished allergist, who claimed a sensitiveness to cottonseed oil. He was confident he could differentiate cottonseed oil from corn oil with some discomfort. He was convinced that all shortenings containing cottonseed caused abdominal discomfort, acute griping pains and diarrhea. Canker sores, edema of the lips, and occasionally hives were other manifestations of his allergic reaction to cottonseed oil. We were unable, however, to demonstrate by passive transfer tests the presence of reagins for water-soluble cottonseed protein or for cottonseed oil in his serum. Accordingly, the ingestion experiments in which our collaborator participated provided a noteworthy sequel to the serological study. Samples of vegetable oils, which included corn oil, cottonseed oil and olive oil, were submitted in trial doses. Neither the subject nor the dispenser of the oils was informed of the composition of the individual samples until the close of the tests. Five of the 14 samples contained cottonseed oil, but in no instance were symptoms of distress provoked by ingestion of them. His failure to discriminate between cottonseed oil and corn oil became evident.

Assured and reassured by the results of the ingestion test, our collaborator is now enabled to partake of foods with cottonseed oil as an ingredient. To an allergist of mature clinical experience, we express our thanks for the demonstration of the importance of the "blindfold" technic in the diagnosis of food allergy.

Mention has been made that the cutaneous and intracutaneous methods of testing with food extracts have their limitations. Extracts of foods which cause clinical symptoms frequently do not give positive skin reactions. The reverse also holds true. An adult of average intelligence is fully cognizant, from repeated experiences, of the foods or beverages which give rise to symptoms of distress. Patients who are sensitive to the powerful allergenic foods, such as milk, egg, fish, shellfish and nuts, have recognized the promptness with which reactions follow ingestion or even contact. Nevertheless, there still remains a group of patients whose clinical history may be vague or indefinite and in whom the cutaneous tests with food extracts may be inconclusive. For such a group the "blindfold" technic represents the ultimate in the diagnosis of food allergy. After an abstinence of 4 days from the test foods, the patient is permitted to ingest a single test food on a fasting stomach. The resulting signs and symptoms are then carefully noted. When several foods are under suspicion, the period for experimentation is an extended one. The variation in the occurrence and intensity of symptoms, so characteristic of chronic diseases, may be due to causes other than food sensitiveness. Moreover, the influence of psychic factors during a prolonged investigation must not be overlooked. There are many allergic persons who are so sensitized to suggestion that their expressions of food disagreements must be evaluated. Such attitudes are betrayed when in consultation they exclaim, "Why, the very thought of that food makes me sick." The reliability of the ingestion test is enhanced by excluding or minimizing psychic factors. The "double blindfold" technic, wherein the identity of the test food is unknown to dispenser and patient, offers that opportunity. Moreover, the suspected food ingested on a fasting stomach must reproduce the allergic symptoms attributed to it. The symptoms, provoked by such ingestion, are determined by the affected "shock organs," the respiratory tract, the gastrointestinal tract or the skin.

This "blindfold" technic proved invaluable in an experimental study, conducted under the auspices of the Corn Research Industries Foundation. Randolph and Yeager maintained that 20 per cent of their allergic patients were sensitive to corn. They also included some of the refined corn derivatives as causes of corn allergy. In treatment, they recommended the avoidance of corn starch, corn sugar and corn syrup. They even urged a careful investigation of the current widespread use of corn syrup in infant feeding, implying thereby that corn syrup might become a sensitizing factor in infancy. If, therefore, 20 per cent of our allergic population are to be adequately protected, they must be denied an important food and its derivatives which are omnipresent in the American diet. Moreover, the widespread use of corn starch and corn sugar in such unsuspected articles as milk cartons, frozen food containers and excipients presumably adds to the menace.

In a preliminary experiment, 50 consecutive allergic patients were subjected to the ingestion test with corn meal, following a prescribed preparatory period. Only 2 of my patients (or 4 per cent) reacted positively. The supplementary phase of the study, that of sensitiveness to corn derivatives, was made possible by the unusually coöperative effort of 1 of my patients.

This patient was a 37-year-old woman, who had been a victim of asthma for 11 years. Her clinical history included a sensitiveness to corn. "The first spoonful of corn will choke me up," she stated emphatically. In fact, the steam arising from boiling corn would excite an asthmatic paroxysm, whereas steam from other foods had no deleterious reaction. An ingestion test was performed to confirm her sensitiveness to corn. On the morning of the test, the patient, having been previously admonished not to take any food, drink or medicine, was offered 4 ounces of warm corn meal mush. After swallowing 1 teaspoonful of the food, she experienced an itching of the lips and immediately developed severe asthma. Appropriate medication brought prompt and complete relief. During a 6-month period, 14 additional feeding tests were performed with cornstarch pudding, corn oil, corn syrup, arrowroot pudding, peanut oil, potato starch pudding and tapioca. The identity of all these test foods remained unknown to the patient, and the identity of the test foods used in 6 of the feeding experiments was unknown to the dispenser. Each feeding test with a corn derivative was repeated. It is of interest to note that the ingestion of corn starch pudding on 3 different occasions provoked an asthmatic attack each time, whereas corn oil, corn syrup, and dextrose which had been administered intravenously in prior emergencies produced no unfavorable reactions.

The following conclusions, drawn from the study of our patient, are significant in that they are based upon adequately controlled observations. The provocative ingestion test furnishes a reliable means of diagnosis of food allergy.

The suspected food ingested on a fasting stomach must reproduce the allergic symptoms attributed to it. The reliability of the ingestion test is enhanced by excluding or minimizing psychic factors. Sensitiveness to corn meal among the allergic population ranks very low in incidence. Sensitiveness to corn starch is of rare occurrence, presumably among the cases extremely sensitive to corn meal. Sensitiveness to other corn derivatives, corn sugar (dextrose), corn syrup and corn oil has not been demonstrated in our ingestion tests. Hence, the application of the "blindfold" technic in the diagnosis of food allergy, as it pertains to 2 very important agricultural products, has been of value in adjusting mental attitudes on the part of patients and allergists alike.

The relationship between mental attitudes and physical disabilities has long been recognized, and the axiom that the mental tone determines the physical tone has been fully accepted. Psychosomatic medicine, an old concept with a new name, implies that obscure emotional states may give rise to symptoms of organic disease. In our daily life each of us has learned of our reactions to whatever fate may have in store. On the one hand, a stroke of good fortune, the realization of an ambition, or the winning of a game makes our tasks so much easier to perform. On the other hand, grief, frustration, disappointment and downright misfortune exhaust our patience and vitality. Under these circumstances the reactions of the asthmatic are similar to those suffering from other chronic diseases, and the explosive symptoms find their origin in the organ or organs which have been the seats of previous disturbance. The severity of an asthmatic attack need not necessarily be measured by the degree of exposure to an exciting allergen.

A patient who had shown a gratifying response to treatment reported that he had had a severe attack of asthma the night before. When pressed for a possible explanation, he replied that he had been very much annoyed with the behavior of his children. Another patient attributed his attack to "something which had gone wrong in the office." The following account of an observing mother is indeed noteworthy. Her asthmatic son, 8 years of age, was a member of a group of children who played together in the neighborhood. In this group there was an older boy of 12 who seemed to enjoy terrorizing the younger boys. When afraid of being beaten, the asthmatic child would run to his mother for protection, breathing heavily and wheezing audibly. For a period of 1 week the bully was not in attendance. He was recovering from a tonsillectomy. During that week the asthmatic child rushed home after playing, breathing rapidly but without any wheezing.

It follows, therefore, that mental or emotional states tend to excite the symptoms of preëxisting asthma or other allergic conditions, and the patient has to learn how to control them with or without the aid of a psychiatrist. This is just as important as the control of physical allergic factors in his surroundings. I have used the term "preëxisting asthma" advisedly. I am of the opinion that a mental, nervous or psychic disturbance cannot be regarded as an essential cause for the development of the disease—asthma. If that were the case, the process should be reversible; and a severe asthmatic attack, which requires medication and oxygen therapy, should yield to mental, nervous or psychic management. Grief and sobbing may be accompanied by wheezing as frequently as the hearty peals of laughter. It is, moreover, significant that the percentage of allergic individuals amongst the insane is far below the percentage of the normal population.

The treatment of the varied manifestations of allergic diseases has been and continues to be a challenge. On final analysis the progress of allergy should be measured by the results of our therapy. For purposes of comparison, we must turn back the pages of history. Sir John Floyer, writing in 1717, 239 years ago, said: "Since the cure of the asthma is observed by all physicians who have attempted the eradicating that chronical distemper, to be very difficult and frequently unsuccessful, I may thence infer that either the nature of that disease is not thoroughly understood by them, or they have not yet found out the medicines by which the cure may be effected."

Salter, in 1868, 88 years ago, betrayed a similar apprehension in his statement: "It must be admitted that the remedies for asthma are of very irregular and uncertain operation; that probably there is no single remedy that is not inoperative in a large number of cases; that that which is useful in one is valueless in another, while there are many cases that resist all remedies. If this intractability of asthma were doubtful, the large number of remedies that have been suggested would be a sufficient proof of it."

Floyer and Salter would have shared our gratification if epinephrine, ephedrine, aminophylline, the antihistaminics, the antibiotics, inhalation of helium-oxygen mixtures, aerosol therapy and the more recent steroid compounds had been available to them. Nevertheless, the specific management by our school, which includes the control of environment, the elimination of offending foods, and desensitization with appropriate extracts, has enhanced the welfare of the allergic to a much greater degree. However, effort toward more effective means of treatment is constantly being made. Each year marks the advent of sundry methods which need be evaluated. The diverse findings by competent observers emphasize the need for more knowledge of the fundamental facts of allergy.

The horizon of knowledge, however, has been extended and human suffering reduced. The progressive medical institutions of our country now include in their organization an allergy service for the treatment of those to whom newer and brighter vistas are opened. To that service we humbly rededicate our efforts.

CONTROL OF AMPUTATION STUMP INFECTION WITH AN ANTISEPTIC SKIN DETERGENT*†

EVERETT J. GORDON, M.D., F.A.C.S.
CHARLES T. BUFALINO, R.P.T.
Washington

NELSON McFARLAND
EDWIN M. BROWN
Administrative Assistants, Orthopedic and Prosthetic Appliance Clinic, Veterans Benefits Office, Washington

THE CONTINUALLY RECURRING cutaneous infections at amputation sites which are frequently encountered in prosthetic appliance clinics constitute a serious obstacle to the adjustment and rehabilitation of the amputee. By virtue of their prevalence and persistence, such infections may restrict or completely prohibit the use of otherwise satisfactory, properly fitting prostheses. This, in turn, can induce profound psychic distress which, together with the delay in resumption of an active social and economic life, can convince an amputee that his disability will never allow him to become a happy and productive member of society.

Regular hygienic care of the amputation stump as a prophylactic approach to the problem of infection appeared promising in view of the availability of an antiseptic detergent with degerming properties of demonstrated value in reducing the cutaneous bacterial population.[1-4] This study, for which 74 amputees invariably applied pHisoHex‡ each morning prior to adjusting their prosthetic device, was undertaken to determine whether an ensuing decrease in the incidence of infection would permit more constant and daily use of the appliance. The non-irritating and hypo-allergenic qualities of pHisoHex[5,6] render the preparation particularly suitable for use over prolonged periods of time.

Incidence and etiology of the infectious process. Fundamentally, staphylococci are responsible for most suppurative infections of the skin, associated with typical abscess formation. Together with streptococci and other potentially pathogenic resident microörganisms, they are ready to invade abrasions produced by devices so intrinsically frictional as prostheses. The resultant active infection may express its intensity as a small pustule or a furuncle, or may even progress to an actual cutaneous ulcer. Since elimination of local irritation is a major therapeutic measure in these conditions, the prosthetic appliance must be set aside during the healing process.

The problem of infection most frequently arises with lower extremity amputees, sequent to the continuous firm pressure of the appliance against the skin, impairment or retardation of circulation, and the deterioration of local cutaneous resistance. Inasmuch as these factors prevail even with a well-fitting prosthesis, they are greatly exaggerated by further circulatory embarrassment when the stump is choked by an improper fit. Among the lower extremity amputees more pronounced pressure phenomena may be anticipated when the limb has been removed below the knee than with the more fleshy part above the knee stump. Due to a lower relative proportion of soft tissue to bone in a below-the-knee stump, the greater pressure per square inch of skin exerted by prosthetic devices is responsible for the greater prevalence of cutaneous irritations and infections observed in these amputees.

---

* From the Orthopedic and Prosthetic Appliance Clinic of the Veterans Benefits Office, Washington.

† This report is published with permission of the Chief Medical Director, Department of Medicine and Surgery, Veterans Administration, who assumes no responsibility for the opinions expressed or conclusions drawn by the authors.

‡ A product of Winthrop Laboratories, Inc., New York, N. Y.

In addition to the trauma which predisposes the weight-bearing stump to dermatologic difficulties, the presence of deep, depressed, indented scars or overhanging fleshy bundles in the adductor and gluteal folds, improper weight-bearing thrusts in walking when the amputee has not adequately been trained in the use of his appliance, and, particularly, poorly fitting or outgrown prostheses have been found to increase the prevalence of infection. More recently, following widespread adoption of the suction socket for above-the-knee amputees, there has been a perceptible increase in the incidence of dermatologic disturbances in this group. The warm, moist, enclosed skin, principally with individuals prone to excessive perspiration but also with others during the summer months, provides an excellent culture medium for bacterial growth. Although the socket represents a mechanical advance, it presents the additional problem of an annoying, unpleasant odor in many cases as well as that of localized infection.

The question of maintaining healthy, intact skin is not, however, confined to weight-bearing stumps but is also of concern with upper-extremity stumps. In effect, wherever a prosthesis is used regularly in a working function the integrity of the cutaneous surface must be preserved to achieve maximum benefit from the artificial limb. It was our intent to do this through the daily cleansing and degerming of the skin in direct contact with the appliance.

Selection of a prophylactic agent. The prolonged antiseptic and non-irritating properties of pHisoHex, which have served to establish the antiseptic detergent as a routine preoperative preparation for the surgeon's hands and for the operative field, appeared well suited to the prophylaxis of cutaneous infections. Many clinical studies reported in the literature have demonstrated the efficacy of pHisoHex in reducing the bacterial population of the skin as well as the long duration of the resultant antisepsis.[5-10] The prolonged antisepsis is further evidenced by the usual sign posted over the surgeon's scrub sink in most hospitals advising him that the scrub period can be shortened provided he is a constant and daily user of pHisoHex. The bacteriostatic and bactericidal action of the preparation exceeds that of ordinary soap-hexachlorophene combinations, and it more successfully maintains the reduction in bacterial flora. Figure 1 presents a comparison of the antibacterial effects of a 3-minute pHisoHex scrub with those of a 10-minute soap scrub.[11]

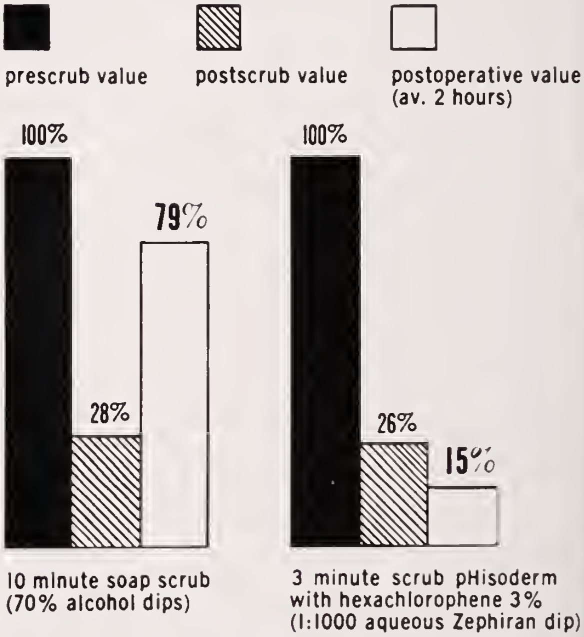


FIG. 1. Comparison of antibacterial effects of a 3-minute pHisoHex scrub with those of a 10-minute soap scrub.

The number of bacteria obtained on culture of the hands prior to scrubbing with either agent is represented by 100 per cent.

Confirmatory evidence that a 3-minute pHisoHex scrub was equal in antibacterial effect to a 10-minute scrub with green soap, alcohol, ether and tincture of Zephiran Chloride was obtained by another group of investigators in a series of several hundred subjects.[10] As part of the same study they were also able to demonstrate a reduction in resident bacteria on skin surrounding raw and denuded surfaces cleansed with pHisoHex.

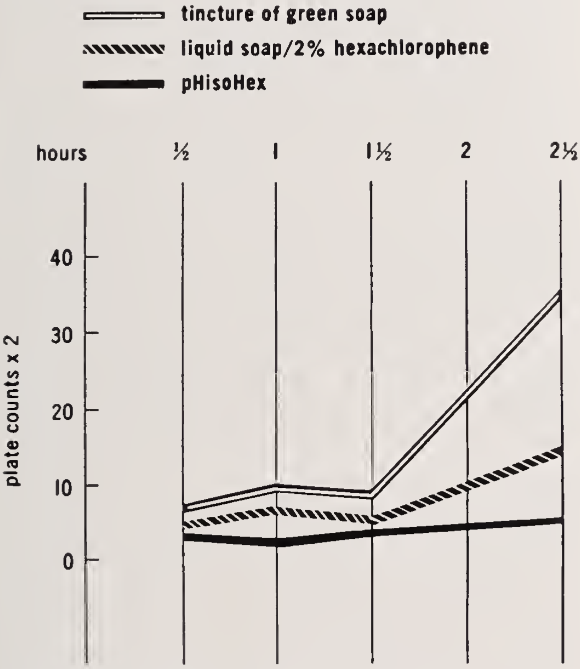


Fig. 2. Comparison of antibacterial activity of commonly used preoperative scrubbing agents.

A further comparison of the antibacterial activity of pHisoHex and 2 other commonly used preoperative scrubbing agents is presented in figure 2. Total bacterial counts of the hands were carried out at half-hour intervals following scrubbing with tincture of green soap, liquid soap containing hexachlorophene, and pHisoHex with the results shown.[12]

Prior to our study pHisoHex had successfully been applied as a prophylactic measure against cutaneous infection in another particularly susceptible group, the diabetics.[3, 13] Ritualized scrubbing of the feet and legs with the antiseptic detergent was found an effective control procedure and, when included as part of a routine method of treatment in one series, reduced the incidence of pyogenic infection by 90 per cent per patient per year.[3] This is of particular significance to the diabetic to whom acute infection frequently presents an actual threat to life.

A final property of pHisoHex which recommended it to us was its ability to abolish undesirable odors for as long as 18 hours in washed areas.[14] This was considered valuable in view of the fact that objectionable odors have been associated with the wearing of prostheses during the summer months and throughout the year in those individuals who perspire freely.

Procedure. Seventy-four amputees originally participated in our study. Of these, however, 12 failed to report regularly for observation and have not been included in our evaluation. The remaining 62 individuals comprised 25 above-the-knee amputees, 23 below-the-knee amputees, 9 suction-socket cases, 2 below-the-elbow amputees, 2 amputations referable to circulatory difficulties, and 1 hip disarticulation. Thirty-four had previously experienced cutaneous disorders, 10 exhibited severely scarred stumps, and 8 were bothered by unpleasant socket odor.

Each amputee received a plastic squeeze bottle containing pHisoHex for direct application of the antiseptic detergent. He was instructed to use only a few drops of pHisoHex, to add as much water as necessary to produce a thin lather, and to massage this lather well into the stump. The need for particular care in covering as thoroughly as possible depressed scars, crevices, and other areas likely to support bacterial growth was emphasized. The stump was then wiped dry without removing any remaining detergent so that a thin film of the material was left on the washed area to exert a persistent antibacterial action. This procedure was carried out each morning or just prior to adjustment of the prosthesis for the day. During the warm months the application of pHisoHex twice daily, in the morning and at night, was recommended to those individuals prone to excessive perspiration or with a history of recurrent skin infection. After several months of treatment or during the winter months a reduction in frequency to 3 times weekly was considered. Some amputees reported the accumulation of a sticky, scum-like secretion as a result of perspiration during the night, and they were advised to thoroughly remove this material by means of the pHisoHex wash prior to use of their appliance.

Results of treatment were evaluated in all cases 8 to 12 months after initiation of the regimen, while 11 amputees were followed for as long as 16 to 21 months.

Results. The results of our study are summarized in table 1. Improvement of the integrity of the cutaneous surface at amputation sites, expressed as a reduction in the incidence of infection, and adjudged by the more constant and daily use of prosthetic appliances, was manifested by all amputees in this series. Of the 33 individuals who adhered to a rigid pHisoHex schedule, 31, or 93.9 per cent, exhibited an excellent response to the hygienic regimen and 2 showed improvement over their pre-treatment state. Of the 29 individuals who applied pHisoHex irregularly, 21, or 72.4 per cent, were adjudged excellent, while the remaining 8 were considered improved. No allergic reactions were observed in any of our test group.

TABLE 1

Efficacy of pHisoHex in Controlling Amputation Stump Infection

Number of participating patients	74
Number failing to report regularly	12
Active participants	62
Classification of amputees	
Above the knee	25
Below the knee	23
Suction socket	9
Hip disarticulation	1
Below the elbow	2
Circulatory difficulties (Buerger's disease)	2
Number of amputees with severe scars	10
Number of amputees with previous cutaneous disorders	34
Number of amputees with socket odor problems	8
Duration of pHisoHex regimen	
First evaluation, 62 patients	8 to 12 months
Second evaluation, 11 patients	16 to 21 months
Results	
Number of patients using pHisoHex regularly	33
Excellent response	31
Generally improved	2
Number of patients using pHisoHex irregularly	29
Excellent response	21
Generally improved	8

Some of the participating amputees reported their observations during the test period. One individual with severe chronic dermatitis of both legs was well controlled and manifested improvement on following a regular pHisoHex schedule. One case of recurrent furunculosis of the stump of long duration cleared with the regular use of pHisoHex, but the furunculosis recurred once more when the regimen was discontinued. One amputee who perspired excessively throughout the year and presented a socket odor problem was well controlled with the regular application of the antiseptic detergent. One instance of cutaneous difficulty, cleared up by treatment, recurred within a week of cessation of the pHisoHex wash. One amputee who had no difficulty when using the detergent regularly developed recurring furuncles on his extremely hairy stump 4 months after he had stopped using the recommended hygiene.

Of 3 individuals who might be considered less responsive to the pHisoHex treatment 2 persisted in using poorly fitting prostheses and the other had a sebaceous cyst which required surgical excision.

CONCLUSIONS

1. pHisoHex is recommended for regular use in the hygienic care of amputation stumps. It is particularly valuable in maintaining cutaneous integrity and reducing the incidence of infection in below-the-knee amputations, stumps marred

by severe or depressed scars, and stumps in contact with suction sockets.

2. A regular pHisoHex regimen will successfully control odor problems in individuals who perspire excessively throughout the year and in all amputees during the summer months.

3. pHisoHex should be applied daily for optimal results. A few drops should be worked into a lather with water and massaged into the stump. The stump should then be dried without rinsing so that a thin film remains on the surface to exert continued antibacterial activity.

4. As a direct result of the reduction in cutaneous infection effected by pHisoHex more regular and continued uses of prosthetic appliances is possible.

5. When good stump hygiene is maintained the serviceability of prostheses is increased and the frequency of replacement is reduced.

6. The use of an antiseptic skin detergent is not a substitute for proper fitting and alignment of a prosthetic appliance. It will not correct skin conditions resulting from unbalanced pressure.

Summary

A frequent difficulty incident to the continued use of a prosthetic appliance, regardless of maintenance or fit, is the recurrent cutaneous infection. Since this prevents the daily use of the prosthesis and delays complete rehabilitation, this study was undertaken to evaluate benefits to be derived from regular hygienic care of the amputation stump with an antiseptic skin detergent. pHisoHex was selected as the prophylactic agent on the basis of the many published reports of its marked degerming properties and hypo-allergenicity.

Experience with 74 amputees, 62 of whom were observed over an 8- to 12-month period, has demonstrated the value of a regular pHisoHex wash schedule in reducing the occurrence of infection and in maintaining the integrity of the cutaneous surface. Referrals to both the dermatologic and surgical outpatient clinics has decreased remarkably since the institution of this pHisoHex routine. Surgical drainage of stump abscesses and furuncles is rare, effecting a considerable economy in amputee and hospital staff time. Many amputees, particularly those with below-the-knee stumps and those wearing suction sockets, are now able to use their appliances regularly and with greater comfort than ever before. The pHisoHex regimen also successfully controlled the odor problem during the summer months and throughout the year for those individuals who perspire excessively. The effective control of sweat and skin secretions considerably lengthens the serviceability of the prosthetic appliance by inhibiting deterioration of those parts which come in direct contact with the skin; this is especially true for suction sockets.

The cost of maintaining good stump hygiene, an important contributor to amputee morale and rehabilitation to an active social and economic life, is remarkably low. The investment in an 8-ounce bottle of pHisoHex, which lasts an average of four months, and the time required for the daily wash procedure afford the amputee an inestimable return in comfort and facility in the use of his prosthesis.

BIBLIOGRAPHY

1. Osborne, E. D.: New York J. Med., 1954, **54,** 506.
2. Farquharson, C. D., Penny, S. F., Edwards, H. E., and Barr, E.: Canad. M. A. J., 1952, **67,** 247.
3. Ashur, M. E., and Guild, B. T.: J. Nat. Ass. Chirop., 1954, **44,** 19.
4. Pratt, G. H.: Cardiovascular Surgery. Philadelphia: Lea, 1954, pp. 167, 170-1, 238, 278.
5. Walter, C. W.: The Aseptic Treatment of Wounds. New York: Macmillan, 1948, p. 185.
6. Guild, B. T.: A.M.A. Arch. Dermat. & Syph., 1945, **51,** 391.
7. Thirlby, R. L., and Nesbit, R. M.: J. Urol., 1949, **62,** 617.
8. Hufnagel, C. A., Walter, C. W., and Howard, R. W.: Surgery, 1948, **23,** 753.
9. Blark, I. H., and Coolidge, M. H.: J. Invest. Dermat., 1950, **15,** 249.
10. Artz, C. P., Pulaski, E. J., and Shaeffer, J. R.: U. S. Armed Forces M. J., 1951, **2,** 819.
11. Dull, J. A., Zintel, H. A., Ellis, H. L., and Nichols, A.: Surg., Gynec. & Obst., 1950, **91,** 100.
12. Shay, D. E.: Oral Surg., 1951, **4,** 355.
13. Edwards, E. A.: Rhode Island M. J., 1953, **36,** 711.
14. Shelley, W. B., Hurley, H. J., Jr., and Nichols, A. C.: A.M.A. Arch. Dermat. & Syph., 1953, **68,** 430.

MAN'S ASSUMPTION OF THE ERECT POSTURE: ITS EFFECT ON THE POSITION OF THE PELVIS*

Gynecologic and Obstetrical Applications

JOSHUA WILLIAM DAVIES, M.D., F.A.C.S.

Attending Gynecologist and Obstetrician, Woman's Hospital Division, St. Luke's Hospital, New York

THE VERTEBRAL COLUMN in most vertebrates is carried horizontally on the fore- and hindquarters, and consequently the field of vision is restricted. Some birds and the giraffe have increased the field of vision by raising the head on a greatly elongated neck. Other animals such as the gorilla raise the torso on elongated fore limbs which act as a prop. The bear, horse, dog and elephant raise the entire vertebral column, including the pelvis, by contracting well-developed muscles of the posterior thigh. They are able to maintain this position for short periods of time only, and walking backward is difficult. It has been assumed that man raised the body in a similar manner and that after thousands of years of adaptation he was finally able to hold the body erect and walk both forward and backward.

As late as the past century textbooks and skeletons articulated in our best museums depict the vertebral column and the pelvis as that of an erect quadruped. As such the channel of the pelvis is directed vertically toward the abdominal cavity with which it is directly continuous. It is to such authorities that obstetricians, gynecologists, and orthopedists refer in their effort to develop the various specialties and remedy the occasional failure.

Roentgen findings, since the discovery of the X-ray, strongly suggest that the pelvis of man is directed horizontally, as in the quadruped. If this suggestion can be verified, then certain accepted procedures should be altered, and the reason why certain technics considered fundamentally unsound have yet proven satisfactory can be explained.

Various attempts have been made to determine the position of the pelvis in upright man, but many variable factors lead to inconclusive findings. Probably the indelible irregularities in the bony pelvis itself, which result from hypertrophy due to use and atrophy from disuse, may assist in solving the problem. A close examination of a human pelvis which has rotated upon the heads of the femora as in figure 1 reveals a pubic bone vertically placed in line with the abdominal wall; however, a stereoscopic roentgenogram of the pelvis directed horizontally at the pelvis reveals a cavity which extends horizontally, and the body of the pubic bone is not vertical but horizontal. In this same figure the pubic bone is in front of the anterior superior spine of the ilium; actually, the anterior superior spine of the ilium is the origin of thigh muscles and consequently it lies in the anterior part of the thigh. The pubic bone is the origin of adductor muscles of the thigh, and hence it must be between the thighs. Examination of the head of the femur reveals that it cannot articulate accurately in the acetabulum when the pelvis is rotated until its inlet faces upward.

A study of the pathway through which weight is transferred from the sacrum to the head of the femur reveals an angulated course when the inlet faces upward, but a graceful arched pathway when the inlet faces forward. The angulated

---

* Delivered at the 25th Annual Scientific Assembly of The Medical Society of the District of Columbia, October 11, 1955.

pathway should strain the sacro-iliac and symphysial articulations, and with the softening due to pregnancy walking should be difficult and painful. Its relative absence suggests that the two halves of the pelvis are forced together, which is possible when the inlet is vertical. The hypertrophied area on the rim of the acetabulum suggests that this area receives the thrust from the head of the femur in walking and especially while lifting. The notched or attenuated segment lies directly opposite the weight-bearing area and suggests that it receives least pressure. In figure 1 the notched portion of the acetabulum approximates the weight-bearing area on the head of the femur. Jarring due to jumping should perforate the lateral pelvic wall and the head should enter the true pelvis, but such fractures are rare; instead, the neck fractures, and this fact suggests that resistance was encountered at the hypertrophied lip of the acetabulum.

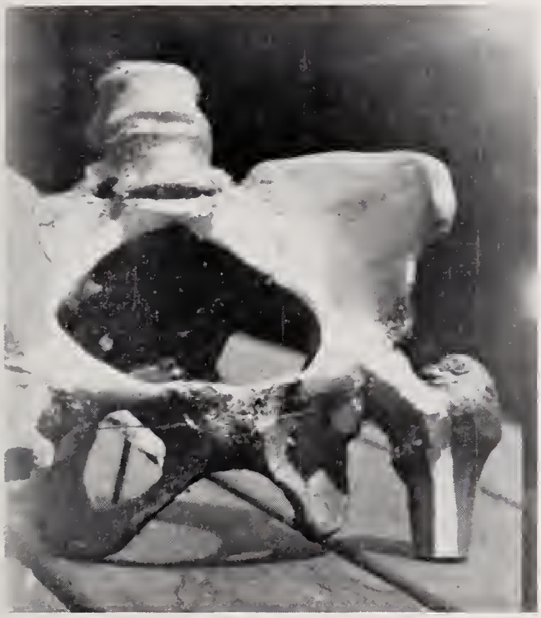


FIG. 1. Human pelvis rotated upon heads of the femora.[1] Reproduced by permission from the *American Journal of Obestrics and Gynecology.*

Muscular function may further indicate which position of the pelvis is necessary for walking. The tuberosity of the ischium (figure 2) is the origin of a heavy group of muscles which are inserted in the knee. Contraction of these muscles draws the knee backward and makes walking possible. When the pelvis is rotated forward as in climbing a hill the tuberosity is removed from the femur and the efficiency of the hamstring muscles is increased. When the pelvis is rotated backward to the position of figure 1 the tuberosity of the ischium is no longer posterior to the femur but medial and anterior to it, and walking backward is impossible. Table 1 summarizes the foregoing discussion.

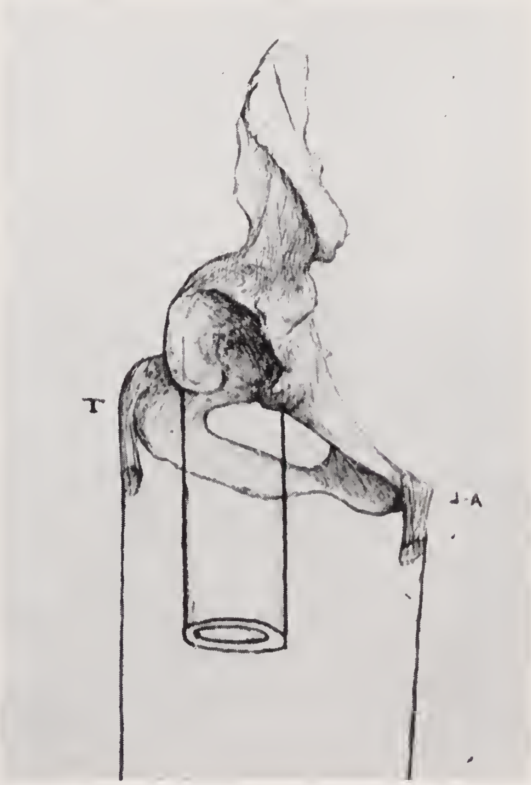


FIG. 2. Femur articulates with the acetabulum so that the notch of the rim carries least weight. Origin of walking muscles is behind femur.[1] Reproduced by permission from the *American Journal of Obstetrics and Gynecology.*

These findings strongly suggest that man did not stand erect by rotating the pelvis on the femora, but that he assumed this position by flexing the back muscles and angulated the spine at the lumbosacral articulation until the torso was held erect and balanced upon the hind quarters.

TABLE 1

Anatomic Features from Which Conclusions Have Been Drawn That the Inlet of an Erect Pelvis Faces Forward

	Rotated Pelvis	Quadruped Pelvis
Pubic bone	Vertical	Horizontal
Symphysis	Glides	Compressed
Pubic arch	Vertical	Horizontal
Acetabulum	Notch carries weight	Not weight-bearing
Head of femur	Does not articulate	Accurate articulation
Weight transference	Angulated pathway	Arched pathway
Anterior-superior spine of ilium	Posterior to pubic bone	Anterior to pubic bone
Tuberosity ischium	Anterior to femur	Posterior to femur
Muscle function	Abnormal	Normal

Obstetrical applications. The most striking example of the need for information as to the exact position of the pelvis arises when the obstetrician is presented with the problem of an unengaged fetal head. If one believes that the inlet is horizontal, the dorsal position should assist engagement; if the inlet be vertical, engagement is encouraged by the patient being out of bed, preferably leaning forward. Occasionally the aftercoming head of a breech delivery fails to enter the pelvis even though the obstetrician flexes the child's head and rotates it toward the largest diameter of the pelvic inlet. Pressure from above may help, but the position of the inlet as the patient lies on the table must be visualized if one wishes to apply the least force to the child's head. Such pressure should be applied vertically and not toward the mother's feet. The latter maneuver compresses the child's head against the body of the pubic bone, from which it must be deflected into the pelvic cavity, and thereby it inflicts greater trauma to the child.

Gynecological applications. These are primarily in the treatment of recurrent prolapse. It has been accepted that the transverse cervical and uterosacral ligaments, the so-called ligaments of Koch and Mackenroth, are the main supports of the cervix, but since they curve laterally and end at the third sacral vertebra, which was assumed to be vertically placed, it was difficult to understand how they could be utilized in the treatment of prolapse. Various operations were devised, and finally the uterus was attached to the anterior abdominal wall by means of fascial transplants and the vagina eventually obliterated by the LaForte operation.

Since it has been pointed out that the pelvic inlet faces forward and that the pubic bone is horizontal, the first 3 sacral vertebrae are nearly horizontal, because they are parallel with the pubic bone. Such a position of the sacral vertebrae changes the direction of the uterosacral ligaments from a horizontal course to a vertical direction and hence makes their utilization the logical one in the treatment of prolapse of the cervix or of the vaginal vault following total hysterectomy.

BIBLIOGRAPHY

1. Davies, J. W.: Man's assumption of erect posture: Its effect on position of pelvis—gynecologic and obstetrical applications. Am. J. Obst. & Gynec., 1955, **70**, 1012.

AMNIOTIC FLUID EMBOLISM WITH RECOVERY FOLLOWING LAPAROTRACHELOTOMY*

Report of a Case

GEORGE J. ELLIS, M.D., F.A.C.S.

Professor of Obstetrics and Gynecology, Georgetown University School of Medicine

SEAMUS P. NUNAN, M.D.

Washington

AMNIOTIC FLUID EMBOLISM is now recognized as a definite clinical entity and is one of the causes of sudden deaths in obstetrics.

This condition was first described by Steiner and Lushbaugh[1] in 1941 when they reported 8 cases with death in labor or shortly thereafter, and in which at autopsy they were able to demonstrate pulmonary emboli made up of epithelial squamae, amorphous débris, lanugo hairs and meconium. Each case followed a particular pattern, usually occurring during or immediately after a hard, short labor. The patient suddenly went into profound shock out of all proportion to blood loss and developed severe chest pains, dyspnea, cyanosis, restlessness and vomiting, with a precipitous fall in blood pressure and a weak thready pulse. Pulmonary edema came on rather quickly, and this sign in the absence of any preëxisting cardiac disease made the picture complete.

They duplicated this condition both clinically and pathologically in rabbits and dogs by giving injections intravenously of human amniotic fluid plus fresh meconium obtained from the intestines of dead newborn infants. The mixture was 1 Gm. of meconium to 9 c.c. of amniotic fluid.

Since their original work other cases have been reported in the literature and proved at autopsy by demonstrating the same pathologic pulmonary condition. Still other cases are reported with recovery in which the diagnosis was suspected but not proved. There are probably many instances in which this condition exists and the shock and concomitant symptoms are attributed to some other cause.

Three of their 8 patients showed postpartum hemorrhage due to uterine atony, but the authors stated that shock preceded the hemorrhage. In other words, shock occurred first, followed by atony and then hemorrhage.

In 1942 the same authors[2] reported 2 additional cases, 1 with death 7 days after the delivery of a full-term stillborn infant and the other following a laparotrachelotomy for hypertension and central placenta previa. The latter patient died 3½ hours after section, and both showed the typical pathologic condition in the lungs.

Griffon and Dyer[3] reported 3 deaths from amniotic fluid embolism occurring in 1950 and 1951 in the New Orleans Charity Hospital. This constituted 11.1 per cent of the maternal deaths from that institution for those years. From 1942 to 1950 there had been 137 maternal deaths, none of which was attributable to this condition. They urged more diligence in seeking autopsies and closer attention to the pulmonary vessels.

Gross and Benz[4] described a method of diagnosis when autospy is refused. This consists in drawing blood from the inferior vena cava or the right side of the heart and centrifuging it. Besides the usual layers of red blood cells, white blood cells, and serum, there is an additional layer which may be fixed in a block and on section will reveal the presence of amniotic contents. They suggest that this procedure be used to establish a diagnosis when the patient is fortunate enough to survive.

---

* From the Department of Obstetrics and Gynecology, Providence Hospital, Washington, D. C.

In a recent article Westbook and Thomas[5] report an amniotic fluid embolism following an abortion of 24 weeks' gestation. They were unable to demonstrate the typical pathologic lesion in the lungs and attributed its absence to the fact that fetal squamae and fat droplets do not appear in the amniotic fluid that early in pregnancy.

REPORT OF CASE

E. H., a 37-year-old white woman, gravida 3, para 2, was admitted to Providence Hospital on December 15, 1955 for an elective cesarean section. She had had previous sections for cephalopelvic disproportion in 1948 and 1949. Her last menstrual period was April 24, and her expected date of confinement was January 1.

She was Rh positive, blood type O, and serologic examination and X-ray film of the chest were both negative. Her past history was noncontributory and her present prenatal course normal throughout. Her weight gain was 29 pounds. Two weeks prior to the present admission she was hospitalized for intermittent lower abdominal pains which subsided, and she was discharged after 2 days.

Examination showed a well-nourished white woman of 38 weeks' gestation. The vertex was presenting but unengaged, and the fetal heart sounds were heard in the left lower quadrant.

On December 16 a low cervical section was done under pentothal and ethylene anesthesia, and a live female infant weighing 6 lbs. and 12 oz. was delivered. The placenta and membranes were expressed and 1 ampule of ergotrate was given intravenously. Blood loss was minimal, and closure was done without incident. At completion of the operation the blood pressure was 110/70 mm. Hg and the pulse rate 80 per minute.

Shortly after returning to her room the patient went into sudden shock and both blood pressure and pulse were unobtainable. She was complaining of chest pains, shoulder pains, and inability to breathe. Since shock blocks aggravated the dyspnea she was placed in the Fowler position. One ampule of Wyamine was added to the intravenous drip which was still running from the time of operation. The fundus was firm and the abdomen soft, and there was no indication of either external or internal bleeding. Shock was out of all proportion to blood loss. A diagnosis of pulmonary embolism was made, and she was given morphine sulfate, 10 mg., intravenously while 500 c.c. of whole blood was started in the other arm.

After ½ hour her blood pressure was recorded at 80/40 mm. Hg., and her pulse was 140 and weak. It took about 3 hours to get her pressure up to 100/70 mm. Hg and her pulse rate down to 100. Her pulse volume was still not good at this time, but her breathing was better. She continued to improve and by evening seemed to be out of danger. Repeated auscultations of the chest showed "wheezing" over the bronchial areas but no rales or diminution of the breath sounds.

The patient improved gradually and was out of bed on the third day. On the fifth day she developed an icteric discoloration to both her skin and sclerae. At this time examination of the chest showed an area of dullness and diminished breath sounds at the left base. An X-ray film of the chest showed a left pleural effusion. The indirect Vandenburgh was elevated to 10 mg., and the electrocardiogram was normal.

The possibility of a hemolytic reaction following blood transfusion was ruled out by a negative Coomb's test. The fluid in the left hemithorax was thought to be blood due to extravasation from the blocked pulmonary vessels, and the icterus due to resorption.

A thoracentesis was done the following day and 25 c.c. of blood obtained. One ampule of Varidase was introduced through the needle to hasten absorption. Follow-up X-ray films showed the fluid to be gradually diminishing. She was discharged on the fifteenth postpartum day, at which time the indirect Vandenburgh was 0.4 mg. A film on the twenty-sixth day showed the chest to be completely clear.

COMMENT

It is quite obvious that this patient had an embolism, since all symptoms were referable to the chest and shock was out of proportion to blood loss. The diagnosis of amniotic fluid embolism was made for the following reasons:

1. The patient was a multigravida in the older age group.

2. The condition came on immediately fol-

lowing surgical incision of the uterus, which allowed amniotic fluid contents to enter the sinusoids.

3. There was no evidence of thrombi in any of the pelvic or leg veins.

4. X-ray films of the chest on the fifth postoperative day showed an effusion at the left base but no residual pulmonary changes. These would be expected in a pulmonary embolism, but the fact that the chest cleared up so quickly except for the fluid points toward an embolism of amniotic fluid origin.

While we realize that the ultimate diagnosis of this condition can be made only at autopsy, a review of the literature since 1941 gives reports of patients with similar symptoms who have died and in whom amniotic fluid contents were demonstrated in the pulmonary vessels. It is reasonable to assume that this complication occurs many times sublethally, the shock and symptoms being attributed to some other cause.

Although it has been known for some time that contents of amniotic fluid were noted in distant organs at autopsy, it remained for Steiner and Lushbaugh[1] in 1941 to describe it as a definite pathologic entity.

Amniotic fluid embolism may be defined as the entrance of fetal amniotic fluid and its contents, namely, meconium, squamae, mucin, lanugo hairs and débris, into the maternal circulation by way of the veins and venules of the myometrium, eventually finding its way into the arteries and arterioles of the lung by way of the right side of the heart.

Clinical Features

The patient is frequently a multipara in the older age group. The prenatal course is usually uneventful, and no complications are seen before labor starts. The patient often goes beyond the expected date of confinement, and the fetus may be larger than normal. The membranes are always ruptured.

Uterine contractions are reported as hard and often tetanic. The characteristic signs appear toward the end of labor or shortly after delivery. They consist of a drop in blood pressure to shock levels, fast pulse rate, restlessness, dyspnea, cyanosis, and death ensuing in a matter of minutes or hours.

Pathologic Features

A gross diagnosis is difficult when the patient recovers. The symptoms are those of typical pulmonary embolism. This entity, however, should be suspected when it occurs after a hard labor in which the membranes have previously ruptured, or following surgical incision of the uterus, and when no previously existing thrombi either in the legs or pelvic veins could be demonstrated.

The diagnosis is made by finding amniotic fluid elements and meconium in the small arteries and capillaries of the lungs. These elements include squamae, mucus, and sometimes lanugo hairs. There is a marked leukocytic reaction frequently compressing the amniotic fluid contents. Areas of both atelectasis and emphysema are seen, as is pulmonary edema.

Hertig[6] in examining 14 placentas showed the presence of amniotic squamous cells within the placenta or between the membranes.

In close to 50 per cent of the reported cases a tear or surgical incision is found in the endocervix or myometrium through which amniotic fluid may have entered the maternal circulation. Microscopically squamae are found in the uterine sinusoids and pelvic veins.

The fetus is often stillborn or dies shortly after birth. Autopsies on these infants contribute nothing to the understanding of this syndrome.

Pathogenesis

It is significant that these patients have large fetuses, ruptured membranes, and hard tetanic contractions, which would favor the forcing of amniotic fluid into the uterine sinusoids. Frequently the fluid contains blood or meconium, strongly suggesting placental damage.

In most cases autopsy reveals insufficient blockage of the pulmonary vessels to cause death by mechanical means. Vascular spasm probably plays a part, or a large amount of amniotic fluid entering the circulation may cause respiratory embarrassment.

Mallory[7] explains this syndrome on the basis of an anaphylactoid reaction due to the entrance of foreign protein material into the maternal circulation. He reasons that since it usually occurs in multiparas previous sensitization may have taken place.

Prior to 1950 in many of the reported cases hemorrhage was a prominent feature. This was first thought to be due to uterine atony following shock. It remained for Weiner and Reid[8] to describe the coagulating activity of amniotic fluid due to a substance similar to thromboplastin. Injection of a large amount of thromboplastin in animals caused shock and rapid death with intravascular coagulation in the large vessels. When sublethal amounts were given the animals passed through a period of shock and survived, and incoagulable blood which was defibrinated was found. When these animals were killed and autopsy performed, no thrombi were found in the large vessels. There were, however, extensive arteriolar and capillary thrombi, particularly in the pulmonary system, involving the periphery of the lung.

Weiner et al[9] suggested that amniotic fluid normally plays a role in coagulation of intrauterine blood and that this assists in postpartum hemostasis. However, when amniotic fluid enters the maternal circulation, intravascular clotting may occur. In this event fibrinogen would be consumed, and the local situation in the uterus would lead to postpartum hemorrhage because of the failure of the blood to clot normally as the result of defibrination.

Diagnosis

In any patient showing evidence of profound shock out of proportion to blood loss occurring during labor, or shortly after its termination this condition should be suspected. If placing the patient in the shock position aggravates the symptoms, particularly the chest pains and dyspnea, this is further evidence of the diagnosis.

Electrocardiograms will be of much help in showing the presence of pulmonary embolism.

Abnormal bleeding from the uterus, episiotomy incision, or any organ should make one suspect the presence of hypofibrinogenemia, which frequently but not always accompanies this condition, and fibrinogen blood studies should be done. The clot observation test can be performed quickly while waiting for a laboratory reading.

If the patient survives the initial episode, X-ray films of the chest may show the presence of pulmonary edema.

Treatment

The patient should be placed in the Fowler position in spite of shock. Breathing is easier this way.

Continuous oxygen should be administered either intranasally or by way of an oxygen tent.

Papaverine should be given intravenously to relieve vascular spasm. The blood pressure may be maintained by means of a vasoconstricting agent such as Wyamine in an intravenous glucose drip.

Whole blood may be given to replace blood loss, but it is most important not to overload the circulation and aggravate an already existing pulmonary edema.

When hypofibrinogenemia is present, fibrinogen should be administered in adequate amounts to restore the level to normal. Any amount less than 4 Gm. is of no therapeutic value.

If the patient survives and X-ray films show the presence of pleural effusion which is causing respiratory embarrassment, a thoracentesis should be done and Varidase inserted through the needle to favor absorption.

Summary

A case of amniotic fluid embolism with recovery following laparotrachelotomy is reported.

Amniotic fluid embolism should be suspected in any labor or delivery in which shock is developing out of all proportion to blood loss.

The fact that this condition is more apt to follow hard labor with ruptured membranes suggests that pituitrin-induced labors should be done only for obstetrical indications.

When meconium appears in the amniotic fluid, the patient should be delivered as soon as obstetrically feasible.

This condition occurs sublethally on occasion, and the shock may be attributed to some other cause.

Shock is explained on the basis of an anaphylactoid reaction.

Hypofibrinogenemia frequently accompanies this condition, and fibrinogen blood levels should be determined

The patient should not be put up on shock blocks, nor should the circulation be overloaded.

The best method of treatment is the administration of oxygen, papaverine, Wyamine, and fibrinogen (in the presence of hypofibrinogenemia).

BIBLIOGRAPHY

1. Steiner, P. E., and Lushbaugh, C. C.: Maternal pulmonary embolism by amniotic fluid as cause of obstetric shock and unexpected deaths in obstetrics. J.A.M.A., 1941, **117,** 1245 and 1340.
2. Lushbaugh, C. C., and Steiner, P. E.: Additional observations on maternal pulmonary embolism by amniotic fluid. Am. J. Obst. & Gynec., 1942, **43,** 833.
3. Griffon, J. P., and Dyer, I.: Air and amniotic fluid embolism in obstetrics. S. Forum (1952), 1953, pp. 352–6.
4. Gross, P., and Benz, E. J.: Pulmonary embolism by amniotic fluid; report of 3 cases with new diagnostic procedure. Surg., Gynec. & Obst., 1947, **85,** 315.
5. Westbrook, O. C., and Thomas, J. R.: Amniotic fluid embolism complicating late abortion. Am. J. Obst. & Gynec., 1956, **71,** 447.
6. Leary, O. C., Jr., and Hertig, A. T.: Pathogenesis of amniotic-fluid embolism. I. Possible placental factors. New England J. Med., 1950, **243,** 588.
7. Mallory, G. K., Blackburn, N., Sparling, H. J., Jr., and Nickerson, D. A.: Maternal pulmonary embolism by amniotic fluid; report of 3 cases and discussion of literature. Ibid., 1950, **243,** 583.
8. Weiner, A. E., and Reid, D. E.: Pathogenesis of amniotic-fluid embolism; coagulant activity of amniotic fluid. Ibid., 1950, **243,** 597.
9. Weiner, A. E., Reid, D. E., and Roby, C. C.: Incoagulable blood in severe premature separation of placenta; method of management. Am. J. Obst. & Gynec., 1953, **66,** 475.

THE SATURDAY SANCTUARY*

An Essay on Passive Dependency

JAMES PATRICK SCANLON, M.D.
Clinical Associate Professor of Psychiatry,
Georgetown University School of Medicine

THE TITLE of this paper suggested itself during the treatment of a patient several years ago. Although this discussion is in the form of an essay, it will be necessary to draw from clinical material in order to illustrate the concept. The patient was referred to me by a local internist because the patient insisted that treatment be conducted by a therapist of the Catholic faith. This demand immediately aroused the suspicion that this individual was seeking an identification with the therapist on a religious basis. This identification is then often utilized as grounds for leniency and sympathy, or that the therapist should not be critical or in any way punitive. During the initial consultation it was noted that the patient was extremely tall, being 6 feet, 4 inches in height, although effeminate in mannerisms, boyish in appearance, self-centered and egocentric in attitudes, but with a high degree of intelligence. Hostility toward authority was early and easily detected. The chief complaints were essentially those of a psychophysiologic gastrointestinal disorder. These included spastic reactions of the intestinal tract, accompanied by looseness of stool for several days to a week, which would then alternate with a longer period of constipation. The present episode had persisted for a period of 5 months, although the past history revealed similar symptoms with the onset during his first year of high school. It was also of special interest that the looseness of stools would occur in the morning during the weekdays but not on week ends. Associated symptoms included vasomotor reactions, inner tension, chronic fatigue, difficulty in concentration, indecision, and anxiousness in the area of his interpersonal relationships. Procrastination was habitual and described by him as: "A luxury to do so—I will put off anything I can possibly put off."

In the past personal history an event of significance was his attendance at a military school in 1944. In regard to this experience, the patient stated: "I absolutely despised the place; and I had nausea and intestinal reactions, together with frequently passing urine, for at least the first 7 weeks I was there. I loathed the place, and I had a knot in my stomach all the time. I also remember that I would have a cold sweat around the face." The onset of the Korean War in 1950 precipitated increasing anxiety about the possibility of being inducted into the armed forces. The mere receipt of a letter from the local Draft Board in regard to his deferment on the basis of employment with the Department of Defense would immediately activate anxiety bordering upon panic. The emotional disturbance would persist for a number of days and be accompanied by the functional disturbances already outlined. "The thought of being inducted produces abject terror in my mind, and I loathe and fear the thought. I don't really know why I have this dread; perhaps it is due to the military school."

In the family constellation there was 1 other sibling, a brother, 2 years the patient's senior; and both parents were living. The mother proved to be the dominant and driving force within the home and entertained magnificent expectations for her offspring. The father was a highly successful businessman, but unfortunately a pale figure of a person in the child-parent relationships. In describing his parents, the patient stated: "If nervousness is inherited, then I could inherit it from both sides of the family, particularly from my father, who has had 1, 2, or perhaps 3 ulcers. He works in ulcer alley; and although he is highly successful, he has taken few vacations, and that I don't like, as I would prefer bankers' hours." Early in therapy the mother gave this background information during a long-distance telephone conversation: "I can still see my son sitting cross-legged on the sidelines when the other boys were playing baseball. To my knowledge he never participated in any of the things that the other boys did."

---

* Read before the Louis Mackall Medical Society in Washington, D. C., March 17, 1955.

In general, individuals suffering from this kind of personality disorder reveal certain characteristics in their thoughts, feelings, and actions. These include an habitual behavior pattern of unconsciously provoking aggression from other people. They rig the situation so that they ultimately suffer in some form of shame, or hurt, or social injury. However, they immediately project the blame for this outcome upon the other person while justifying themselves and repressing their role in precipitating the interaction. They are aptly described as "injustice collectors." They typify what Ulysses said of Ajax: "Methinks Ajax treats people in such a way as to cause them to dislike him." They are addicted to self-pity as an aftermath to their masochistic technics while they portray themselves to others as the poor and innocent victims of other people's meanness. These individuals are also usually pessimistic, and optimism is merely utilized as a veneer to cover their expectations of being deeply disappointed. They are strangely unappreciative and prone toward chronic complaining. They are submissive with individuals whom they consider to be stronger than themselves for any reason, particularly in personality integration, while they can be astonishingly cruel to persons whom they consider to be weaker. This cruelty is an act of bravado aimed at demonstrating how aggressive they are, although this is really a cover for their deep-rooted passivity. This contradictory behavior may be misleading unless the façade is recognized as a camouflage.

The disturbed emotional organization reflects itself in the sexual area. The male is either impotent to some degree or suffers from premature ejaculation. The female is most often frigid but is always blaming the male as the person responsible for this. The marital arena is almost always fraught with strife and contention, since such personalities demonstrate an ingenuity for keeping the misery going. With amazing accuracy they often select a marital partner with similar emotional problems. This establishes an emotional equilibrium in the relationship which satisfies unconscious sadomasochistic needs. The provocative technic is then employed to precipitate aggression in order to atone for guilt feelings through their daily dose of injustice collecting. In refusing love, affection or tenderness they present a façade of aggressivity, which is merely an effort to deny their deep-seated dependency. Secretly they nurse an infantile self-concept of "being an exception" or "different" and even "unique." This attitude leads to the expectation of deferential treatment from others; and when this is not adequately manifested, it is seized upon as evidence of abuse, lack of appreciation, and the equivalent of rejection. The egocentricity of these individuals incorporates omnipotence. This is a compensatory residue from the infantile era and is manifested in the expectation that by magical gestures they can control their environment. The initial impression is gained that these individuals are parasitic. On deeper exploration they are motivated by security and power operations as defenses erected against the anxiety associated with the unconscious fantasies connected with significant people in the past.

Our patient showed most of these characteristics. The pattern of his day-to-day living was rather typical. While attending the Foreign Service School he managed to get from class to class but at night would procrastinate in regard to his studies and invest most of his time cursing his Jesuit professors whom he referred to as "black-robed bastards." The clerical cassock was here identified as a dress and established the female figure, while at the same time the priest bears the title of Father.

After graduation and while working for the Department of Defense he would come home from the office during the weekdays and spend the entire evening sitting "transfixed" before the television, our most modern version of perpetual emotion. His recreation and entertainment were consistent with his passivity. As previously mentioned, his functional disturbance would mysteriously vanish over the week end, and Saturday was indeed a special day to him. His life was spent living from one Saturday to the next, because this day represented a sanctuary wherein he was free of responsibilities, could sleep as late as he liked, and could revel in his temporarily carefree existence. Interest and enthusiasm would then return, and he would have sufficient energy to take a "date" dancing at the Shoreham on Saturday night. However, on Sunday the moodiness and irritability would begin to return, and he would be mildly depressed and preoccupied with the inexorable fate of returning to that "sweat shop" the next day. On Monday morning he would drag himself to work suffering from nausea and gut-rumbling, the latter representing a systemic growling at the world in general.

After treatment had proceeded for some months it became possible to increase the frequency of his interviews from 2 to 3 times a week. However, the additional hour of necessity fell on a Saturday morning at 9 o'clock. The unshaven patient was on time for this interview, tieless, but wearing a scowling expression. After entering the office, things began to happen; and a significant event took place in a very quiet way. After an exchange of the customary "Good morning," the patient draped himself on the couch; but from then on not one word was spoken for the next 50 minutes. At this point we were operating on a nonverbal level of communication, representing reactions dating back to the preverbal era wherein the problem developed. The patient closed his eyes and at times tried to create the impression that he was sleeping. It was elected in this situation not to interrupt his performance. The silence represented a means of ignoring me, but more than that he was acting as though the therapist did not exist. This then symbolized a way of getting rid of me, killing me off, and was essentially the expression of murderous impulses. It was felt that permissiveness was necessary in order to bring this hostility into focus. After some minutes the therapist felt a need to cough, but this was suppressed as it would have represented a counterattack by forcing him to pay attention to me or to be aware of my presence. At the end of the hour, the patient did not say goodbye but merely got up and lumbered out of the room. There was no longer any need for him to observe the social amenities, because the therapist had been successfully annihilated. Dead people no longer care about formalities or cultural courtesies. At the next interview he was able to discuss the fact that he had been telling me "to go to hell," and it was possible to identify his hostility as being directed toward his mother.

The transference reaction was toward me as a substitute for his mother, who had rudely kicked him out of his bassinet and then had compounded the felony by demanding that he do some chores around the house on Saturday morning. In this instance the office stood for home. In his ambivalence the patient possessed tremendous hostility toward his mother, but of equal strength was his passive-dependent attachment to her. He had hostility toward all women, and it was externalized toward the world in general and authoritative figures in particular. To him they were all substitutes for the original authoritative person in his life, the mother who was the dominant figure in the child-parent relationships. He both hated and feared the mother, felt guilty over his hostility, but sought at the same time to perpetuate her protectiveness through multiple refuges as a substitute for her. These included school, camp, work, his apartment, the bed as a substitute for the bassinet, and the repetition of dependency in his friendships. Difficulty in closeness in the mother-child relationship resulted in his sense of helplessness; and this was endlessly repeated in the pattern of his interpersonal relationships.

In his rich fantasy life, a substitute for actual accomplishment, he could thoroughly enjoy visualizing himself as floating serenely in space on a billowy cloud. He frequently talked of his intense desire to go to Florida where he would then sit idly in the warm sun by the water's edge. He viewed the world as a jungle and people as beasts with ulterior designs. He fantasied himself as being in a cave, but felt that he could not leave this retreat as he would not survive other people tearing him to pieces. These fantasies were filled with maternal symbols, especially the uterine configuration.

After the patient had been in treatment for over a year, he came in one day and reported being aware of a strange physical sensation. He described this sensation as though he were being persistently pushed from behind, and that he could feel a kind of pressure over the back of his head and shoulders. The sense of pressure, of course, was being exerted by the therapist. At the same time he was aware of something ill-defined surrounding him and described it this way. "There is something to the East (left), to the North (back), and to the West (right), but to the South (front) there is nothing but a yawning, black abyss. I'm being pushed in that direction; but I am afraid to go that way because it will be getting on a merry-go-round that will end ultimately in death. I feel that I am fighting against this force that is pushing me, and I resist it because I feel safe here in this kind of enclosure." Here indeed was the Saturday Sanctuary identified as a uterine retreat. The patient was then engaged in a magnificent maneuver to remain in the womb where it was warm and soft, and he could be fed and protected. It was also a defense against what is probably the basic fear in mankind, that is, the fear of death. Remaining in the uterus was a psychologic bid for immortality. By refusing to be born, he was engaged in a magical gesture of not beginning life; and in this way he could thwart death. As this was both a security and a power operation, this manipulation of environment required omnipotence so that he had to assume godlike qualities in order to control his destiny. Induction into the armed forces threatened to shatter these defenses, since he could no longer entertain his illusions in a regimented life. For that reason he often threatened to dodge the draft by leaving his mother-country and going to Canada as a last haven of refuge.

Similar unconscious motivation was manifested in another patient who came to treatment for a gastric ulcer. Along with castration anxiety, this individual also suffered from phobic formations. It is a well established psychologic fact that a fear may cover up an unacceptable wish. In this instance the fear of insanity masked the desire to be mentally incompetent because then he could not be expected to discharge his adult responsibilities. The fear of heart disease cloaked the wish to be a semi-invalid from whom physical exertion would not be demanded. As Austin Riggs would say: "Nobody expects anything from an invalid except that they be a good invalid." The fear of being a pauper hid the secret desire to be indigent, and then he could justify care through the charity of the public. These goals were desirable because they were aimed at the frustration of parental expectation, and they represented the vicarious expression of considerable hostility. In both cases the hostility appears to have been generated by the frustration of their passive-receptive demands. The severe degree of regression represents a defense in itself, while it is at the same time a refusal and resistance erected against each new change in environment or when reality demands a higher

(Continued on page 410)

President's Page

ANOTHER ADMINISTRATION IN THE MAKING

It is perhaps not so well known to members of the Society that the President-elect not only spends a year of service on the Executive Board of the Medical Society, during which time he becomes familiar with the problems of the office which he is later to assume, but he also has other important duties to perform. For instance, there is the somewhat time-consuming but very pleasant task of selecting committee chairmen and members to serve on his team, upon which rests, in a large sense, the success or failure of his administration.

Many of the members of our Society might be interested in knowing how this procedure is carried out. Like most other Presidents-elect in recent years, I addressed a letter to all Active and Life members, requesting those who were interested to volunteer for service on a committee of their choice. The response to these letters was exceedingly gratifying, indicating that a large number of members were interested in participating actively in the Society's affairs.

Obviously, it was not possible to satisfy all the requests. The continuing operations of the Society demand that a certain number of previous committee chairmen and appointees be reappointed in order that their previous experience would be constantly available. Many committees are also more desirable from the standpoint of service, and the requests for appointment to these far exceeded the positions available. As a consequence, many appointments had to be more or less arbitrary. Like my predecessors, I could not know all members of a society as large as ours. In many instances the problem is discussed with either previous or new committee chairmen. Information about various members is also obtained from the membership files in the Society's Executive Offices. When all this information has been gained, the individual is then asked to serve where the President-elect thinks he will do the best job, hoping that his judgment will be sound.

There are about 300 members required to serve on 28 committees, rendering the job of considerable magnitude. It is doubtful if any President-elect was ever completely satisfied with his appointments. He is well aware that despite his best intentions, someone whom he has chosen will not live up to expectations. On the other hand, many will display unexpected talent for organization work and still others reveal real qualities of leadership.

It is not too much to say that in appointing committees the President-elect is laying the foundation of his administration. If it is sound, he need have very little concern about the organization structure which he builds it on. On the other hand, if it is weak, serious difficulties may lie ahead.

For myself, I am confident that a sound foundation for the incoming administration has been laid. With the help of all the excellent talent available, we should be able to give a very good account of ourselves.

Ralph M. Caulk

RALPH MEARLE CAULK, M.D.

President, The Medical Society of the District of Columbia, 1956–1957

Editorials

RALPH MEARLE CAULK, M.D.

Dr. Ralph Mearle Caulk, 90th President of the Medical Society of the District of Columbia, is a native of Kansas. However, he is no newcomer to Washington, having practiced his specialty, radiology, in Washington for the past 17 years. During this period, he has grown tremendously in professional stature and is today widely recognized by his profession here as elsewhere as one of the leaders in his field.

Born in Linwood, Kansas, on August 5, 1909, Dr. Caulk is the son of Jacob Harry and Daisy Harbaugh Caulk. His early education was received in the public schools of Linwood. He took his premedical training at Ely Junior College, Ely, Minnesota, later transferring to the University of Kansas at Lawrence, Kansas. He received his degree in medicine from the medical school of the University in 1934.

There followed a rotating internship at Trinity Lutheran Hospital, Kansas City, Missouri, in 1934–35, and a residency in radiology at Garfield Memorial Hospital in Washington, D. C., in 1935–36. He was a fellow in radiology with Drs. Groover, Christie and Merritt, Washington, D. C., in 1936–1938, and with the National Cancer Institute (Chicago Tumor Institute) in 1938–39. He was certified by the American Board of Radiology in 1939, the year in which he was licensed to practice in the District of Columbia.

He entered the United States Naval Medical Corps on June 4, 1942, with the grade of Lieutenant (j.g.) and served until March 5, 1946, when he was released from active duty with the rank of Lieutenant Commander. Immediately upon severing connections with the armed forces he returned to active practice in Washington.

Dr. Caulk is a member of many scientific organizations, including the District Medical Society, of which he has been an Active member since 1939, the American Medical Association, the Hippocrates-Galen Society of Washington, American Roentgen Ray Society (Second Vice President, 1950–51), Radiological Society of North America, American Radium Society, and Phi Beta Pi medical fraternity. He is a Fellow of the American College of Radiology, a member of the Board of Trustees and the Executive Committee of the American Cancer Society (District of Columbia Division), and the Tumor Boards of Episcopal Eye, Ear and Throat and Garfield Hospitals.

Dr. Caulk is at present Medical Director of the Cancer Detection and Tumor Clinics at Garfield Memorial Hospital; Senior Attending Radiologist at Garfield Memorial Hospital; Director of Radiology, Episcopal Eye, Ear and Throat Hospital; Consultant in Radiation Therapy to the U. S. Naval Hospital, Bethesda, Md.; and Area Consultant in Radiology to the U. S. Veterans Administration.

In 1940 Dr. Caulk was married to Eileen Alicia Reilley, of Stratford, Connecticut. They live at 121 Beverly Road, Manor Country Club, Rockville, Maryland.

Although not active in the Society's affairs until about 3 years ago, Dr. Caulk is not a neophyte in medical organization work. In fact, he has a broad experience with national groups, having served a number of them with distinction in various capacities. His talent for organization has been revealed on a number of occasions when he has headed committees on arrangements for

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.

national medical meetings, several of them held in Washington. He is a stickler for details, the minutest of which receive his attention. In other words, he seeks perfection in this as in his chosen field.

Personally Dr. Caulk is popular with those who know him because of his modesty, friendliness, and invariable courtesy. In true western tradition he is frank and open in expressing his views, which are marked by common sense. Few men are as tolerant and as generous as he.

Dr. Caulk has long been an enthusiastic golfer, which undoubtedly had something to do with his decision to live at Manor Club. There he relaxes from his strenuous, day-to-day professional activities. It has long been his practice to vacation in mid-winter so he will not become stale in his work. Such vacations are usually out of doors, where he soon gets what he seeks—a new lease on life.

From the above, it must be evident that the Society will receive at the hands of Dr. Caulk an intelligent and vigorous administration, with a record of real accomplishments.

WHAT'S GOING ON IN BLOOD?

In the emergency room, the operating and delivery rooms there is usually available a bottle of quality blood for the patient. It is a far cry from yesteryear when whole blood was used as a last resort and for lifesaving purposes only; when frantic calls went out for donors, many of whom were incompatible or otherwise unsatisfactory. Today these donors' time for the bleeding is worthwhile, since even if their blood should be incompatible with the patient's it will still be used, and the patient can get blood already donated by someone else. There is certain luxury in having blood when needed, and it is important to have blood given at the donor's convenience instead of under stress. This splendid arrangement came about through blood-banking.

World War II provided the need and widespread encouragement for whole blood in the medical armamentarium. The Korean War proved the value of blood-banking organizations and indicated the necessity for unity between them. Last year the 5 national associations most concerned with an over-all national blood program formed the Joint Blood Council. In the field of blood this Council represents the medical profession generally from the American Medical Association, hospitals from the American Hospital Association, medical specialization from the American Society of Clinical Pathologists, independent blood banks from the American Association of Blood Banks, and Red Cross regional centers from the American National Red Cross. These member institutions correctly believed that each could learn from the experience of the other. Headquarters for the Council is here in Washington. It has official encouragement from President Eisenhower.

Plans are now under way for the Council to conduct a Nationwide survey of blood-banking facilities and publish a directory. For the first time there will be established an authentic record of blood-banking facilities—where they are, the extent and method of operations. It will undoubtedly form the basis for many future programs of interest to national defense and to the pharmaceutical and hospital supply industries. By simply focusing national attention on each blood bank's operation we hope there will be some self-analysis of local and national procedures, standards and philosophies. It remains to be seen how throwing the light of public scrutiny on all types of blood-banking will of itself tend to eliminate that which is bad and promote that which is good.

As indicated in the first paragraph, we have come a long way in developing blood-banking. In the not too distant future we shall see the results of today's intensive blood research, perhaps a lengthening of the usable life of whole blood far beyond the present 21-day span. Eliminating the hazard of hepatitis virus in plasma is a hopeful possibility which may soon be enjoyed. These two developments alone will accelerate much of the progress which has been retarded until recently. Blood-banking and research have paved the way for the formation of many artery, bone, eye and other tissue banks. These banks, many of which were born and are still housed in community blood banks, have brought ophthalmologists and more surgeons closer to the appreciation of a blood bank's potential.

The Joint Blood Council has many questions before it, and a tolerant and helpful profession giving support will be rewarded by better answers which can be used as guidelines in blood-banking, research and education. Some of these questions are: How much whole blood is being used today? Can banking facilities be expanded quickly and sufficiently in case of another war? Should the Government subsidize fractionation plants as it does other defense industries? Are blood expanders safe for every physician to use? Should insurance companies cover the cost of blood in their contracts? If so, will this dry up the motivation for voluntary blood donations?

One question put to the Council on charges for blood has been answered to the satisfaction of the member institutions listed above: "Since blood is derived from human beings only, it should not be sold for profit. However, all services rendered in the collection, storage and administration of blood cost something and are paid for by or on behalf of every recipient of such services. When a service charge is made to the recipient, it may include all or part of the costs of the operation, including normal depreciation, but the intentional realization of substantial profit is not approved."

Frank E. Wilson, M.D.
Executive Vice President,
Joint Blood Council

THE DOCTOR IN COMMUNITY AFFAIRS*

A number of years ago the chain stores got the reputation of not being interested in the towns they served. True, they sold good groceries, or clothes, or shoes. They sold them at prices the customers liked. But they let matters stop there, and in the end they paid for it! Rightly or wrongly, people began to say that "the chains" took all the profits they could get out of a town and put nothing back in return.

Today their ordeal by anti-trust suit and oppressive legislation seems about at an end, but this result has been brought about by hard and intelligent work to win back the public approval they almost lost.

Perhaps there is a moral in that story not only for businesses like mine, but for you in the medical profession as well, since both of us seem to have reason for concern over how the public feels about us.

There are times, for example, when the public takes its slipper to the telephone company, in one or another of the towns we serve. And very often the criticism will start out like this: ". . . Now we don't mean the operators and the others who work here. They're fine folks and they do the best job they can, but . . . ," and then the company will get the works!

In looking over the American Medical Association's recent survey of public attitude toward the medical profession, I note a curious parallel to this. It is, by the way, an excellent survey and its results should be heartening to all of you. But there is an interesting margin between the high regard your patients have for you as individual doctors, and the somewhat lower regard the public seems to have for you as a profession.

---

* Excerpts from an address delivered before the Medical Society of the State of New York in New York City, May 10, 1956.

Clearly, your patients like you as individuals. They have confidence in you, they know you work hard, and they believe your fees are all right, but about doctors in general they're not so sure.

And—perhaps of even greater significance—you have in the background the indications that there are well-organized groups which favor socialized medicine and similar restrictive measures.

It seems to me that in your case too, the public sometimes says: "They're fine folks, but. . . ."

We made our own survey among the secretaries of more than 150 Chambers of Commerce throughout New York State [to determine their opinions on physicians as factors in community life]. What they had to say about you confirmed this. They give you high marks as individual doctors, but, rightly or wrongly, they think you drag your heels when it comes to taking part in community affairs.

I believe you will be interested in some of the details from this survey.

Only 1 out of 5 of these Chamber of Commerce men, less than 20 per cent in fact, said he thought that doctors were sufficiently active in any sort of community affairs in his town.

The one who did think so was, naturally, quite sympathetic and understanding. For example, one secretary wrote: "I cannot honestly say that the doctors of this community, or doctors in general, could be any more active. In spite of the great number that we have, they are all exceptionally busy men. However, I have found that the busier they are practice-wise, the more coöperative they are in civic affairs."

Another wrote: "A doctor is an extremely busy man, but we find that doctors are ready to support personally or financially our projects and to attend our affairs. Of course, some are more active than others, but it is amazing that they find time to even participate as they do."

But what of the 4 out of 5 who were critical? They represent more than 80 per cent of the group. and some were quite sharp in their comments.

Here are some quotes. One secretary wrote: "As a group the lack of community interest is amazing." Another said, "Some few are outstanding community leaders. The majority seem to consider that membership in the country club discharges their community obligations." Still another said, "With all respect to the medical profession they live too much within their own sphere. Many feel that the community needs them rather than they need the community, and therefore the affairs of the community and its welfare and future is no concern of theirs." "When the doctor has a problem, improved or enlarged hospital, socialized medicine, etc., he expects the community to rally round him. The community is entitled to reciprocity."

One put his conclusions into these words: "In general, I believe doctors are asking for socialized medicine."

I've picked out some of the bad ones to give you here—and let me say parenthetically that I've seen comments just as sharp on questionnaires regarding my own company and found them just as disturbing as I know you find these.

By and large, these folks seemed to recognize your problem. One man wrote, "I have often seen physicians attempt to take leadership in some community effort, only to be called on emergency and have to turn it over to someone else." This note recurred again and again, and I have had some personal experience with it.

Nevertheless, the average Chamber of Commerce man does not believe that emergencies and a busy schedule are valid reasons for avoiding civic work. They believe that doctors can and should find time to sit on committees and boards.

When 8 out of 10 in a key group like this say they do not feel you take enough part in the affairs of your town, I believe you should listen—and think.

You have back of you a fine public relations program. I have looked over the plans and the handbooks prepared by your public relations people for your state and national associations, and I have never seen finer staff work.

But let me say this about public relations plans: They won't work unless they are backed up by personal communication on the home front. You can have the best public relations program in the world, but unless it is backed up by the rank and file, through active participation in community affairs, it won't make very much of an impression.

Kennerly Woody
Vice President,
New York Telephone Company

INTERNATIONAL CERTIFICATES OF VACCINATION

During 1954, 452,049 persons traveled outside the United States. This number does not include the thousands who daily cross the Canadian or the Mexican borders.

The International Certificates of Vaccination form which you are called on to complete whenever you vaccinate a person for international travel is a very important document. Persons can be quickly processed at quarantine here and abroad when they carry a valid vaccination certificate with complete information and proper authentication.

The vaccinating physician can help in this procedure by always using the International Certificates of Vaccination form to record complete immunization data, and by instructing the prospective traveler to have the certificate authenticated by the local or state health officer. The health officer can speed the process by using his official stamp or seal to authenticate the certificate. If the health officer does not have either, the United States Public Health Service suggests that he have a stamp made which includes the term 'health officer' and the name and address of the health department. The act of applying the stamp to the certificate is required by international agreement for the purpose of attesting to the fact that the immunizing physician is a practicing physician within the area, thus reducing the possibility of fraudulent certificates being issued. The certificate is not valid without this 'approved stamp' and the traveler may be exposed to delay or other difficulties.

The International Certificates of Vaccination form is given with the passport application. If the person is traveling on a tourist card he may obtain his certificate from the local health department or purchase it from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 5 cents a copy. Most travel agencies and automobile clubs also have the certificate.

The coöperation of all those concerned with the issuance of a valid certificate to the traveler will assist in helping the United States to maintain its present zero morbidity rate for smallpox in spite of the disease being present in other areas of the world.

Regina A. Burns, R.N.
Chief, Epidemiology and Immunization Branch, Division of Foreign Quarantine, Public Health Service, Department of Health, Education and Welfare

FEE INCREASE FOR PRIVATE DUTY NURSES

For some weeks the Board of Directors of the Graduate Nurses' Association of the District of Columbia has been giving very careful consideration to the request of its Private Duty Nurses' Section for approval of a new and increased fee schedule. At a conference with representatives of the Section held on May 10, 1956, the Board of Directors voted unanimously to approve the recommended fees, to become effective June 1, 1956.

Under the new schedule, private duty nurses are authorized to charge $16 for 8 hours of consecutive nursing instead of the present $15. Related fees for special supplementary and miscellaneous services are outlined in the accompanying schedule.

Miss Edith M. Beattie, Executive Secretary of GNA, has requested the help of members of the Medical Society in interpreting to the public the necessity for the increase in fees for private duty nursing. Private duty nurses do not receive customary fringe benefits, such as annual and sick leave, and they must pay the entire contribution to old age and survivor's insurance. In addition to being faced with these expenses herself, the private duty nurse, in the opinion of the Board, has not been receiving an annual income commensurate with her professional preparation and responsibility.

FEE SCHEDULE EFFECTIVE JUNE 1, 1956

1. General Nursing (for 1 patient):
   Consecutive 8-hour duty, $16.00; 12 hour duty, $24.00
2. Multiple Nursing (2 patients on emergency basis only):
   8-hour duty, per patient, $12.00
3. Hourly Nursing (to be used when employed specifically on an hourly basis—total time not to exceed 3 hours)
   First hour or fraction thereof, $5.00
   Each successive hour or fraction thereof, $2.00
   Special treatment (hourly rate), $5.00
4. Special Services:
   a. Poliomyelitis, contagious disease, mental and alcoholic
      8-hour duty, 1 patient, $17.00
      12-hour duty, 1 patient, $25.00
      Multiple (2 on emergency basis only) 8-hour duty, per patient, $13.00
      In hospitalized cases of poliomyelitis, where arrangements have been made with The National Foundation for Infantile Paralysis, bills are paid on regular payday of hospital; otherwise, bills are paid weekly upon presentation.
   b. Nursery
      Infant in nursery, regular fee
      In-room nursing (mother and baby), 8-hour duty, $18.00
   c. Relief
      Private-duty nurses' rates are to be paid for relief of 14 days or less in hospitals, clinics or offices.
5. Travel
   a. When traveling in the employment of a patient, round-trip transportation, food and lodging in addition to the fee for service are paid by the patient. The nurse is entitled to the daily fee until her return to place of departure. Receipts for expenses are presented to the patient.
   b. When nurse uses own car on a case outside of city limits, the patient is charged 8 cents per mile.
   c. One nurse traveling with a patient over a period of a day or days shall charge fee for 20 hours, $40.00
6. Miscellaneous
   a. If a nurse is on duty part of a day she shall charge for a full day.
   b. Overtime in excess of 8 hours may be charged $2.00 for each hour or fraction thereof.
   c. If a patient cancels a nurse's service after arrival on duty, she is entitled to one day's fee.

Insurance or workmen's compensation cases are to be paid weekly or upon presentation of bill.

A weekly period means 5 days (40 hours). This is to be interpreted as such wherever "weekly" appears.

MEMBERSHIP

The following applicants for membership will be voted on at the meeting of the Executive Board, July 23, 1956.

For Active Membership

Arthur Burgerman, Indiana University—1948
Edward William Hawthorne, Howard University—1946
Clarence David Hinton, Howard University—1942
Ramsey Cunningham MacCordy, Tulane University—1958
Philip Henry Philbin, Yale University—1947
Julius Samuel Piver, George Washington University—1952
Pearl Alexandrina Watson, Howard University—1948

For Associate Membership

John Esau, University of Pittsburgh—1950
James William Oberman, Georgetown University—1949
James M. Whitlock, College of Medical Evangelists—1953

For Resident-Intern Membership

Prokopes Colevas, George Washington University—1954
Joseph Francis Schanno, Georgetown University—1954

Recent changes in membership status:

Active to Associate

Abe M. Cohen
Cyril Crocker
James L. Keating

Active to Affiliate

Richard H. Fischer
Carmon R. Naples
Oliver E. Thompson

Active to Resident-Intern

William H. Wallop
Albert S. Winer

Resigned

Active

Daniel E. Mack
J. Wayne McFarland
Edward C. McGarry
James A. Sowers
James E. Swan

Associate

Murray Grossan

ANNUAL REPORT OF PRESIDENT OF MEDICAL SERVICE*

This report is on the state of the Service. It involves both a picture of the present status and a recital of the events which have produced and influenced it.

Medical Service is a medium for the exchange of patients' dollars, deposited in prepayment, for health services as furnished by physicians. Local control and nonprofit operation are implied.

The size of the Service is measured most frequently in terms of number of people involved (now more than 550,000) or money spent for service (now more than 5 million dollars annually). Also important, however, is the extent to which all services required by each patient are covered.

The balancing of all the influences which bear on the Service as it is, and the orderly development of proper change to what it should be are the prime duties of the Board of Trustees. Responsiveness to the rights of all who have a stake in the Plan with an accurate judgment of the golden mean of balanced administration is the most constant concern of all members of your Board.

Although it does not frighten or restrict them in their duty, they are aware of the legal requirement that each one represent the Plan and not any special group or interest.

I cannot speak too highly of the unselfish, dedicated conduct of the members of this Board, and I am grateful to all of them for their inspiring example.

In reviewing the history of Medical Service of the District of Columbia since it was first developed by the Medical Care Committee of the District Medical Society, it is apparent that periodic intervals of adjustment and upheaval are more or less inevitable. At the present time, we are on the threshold of another major move, and in our preliminary efforts to bring this program into being we find we are involved in a situation which is not accepted by every physician as the program best suited to his own particular interest. However, most physicians are able to visualize the broad scope of events, and the increases in income ceilings and fees which were proposed for the new program were approved by 76 per cent of the Participating Physicians voting on this proposal.

Until this year, Medical Service operated in the state of Virginia without formal legal status. Early this year, after negotiations with the Richmond Blue Shield Plan, in which it was agreed that specific areas in Northern Virginia should be served by Medical Service of the District of Columbia, an application to do business in Virginia as a foreign corporation was submitted to the state Corporation Commission. This application was approved and a license issued. Our status in the state of Virginia now is clear-cut and mutually agreed upon.

Broadened legal status has facilitated a change in physician relation to the Plan. The By-laws of Medical Service have been changed to eliminate the status of Coöperating Physician and to permit physicians who are not members of the Medical Society of the District of Columbia to become Participating Physicians at the discretion of the Board of Trustees. Coöperating Physician Agreements will be terminated at the end of this month. Approximately half of the Coöperating Physicians have already submitted Participating Physician Agreements.

In trying to establish its legal right to define its exact area of coverage, especially in relation to podiatry, Medical Service has filed a suit for a declaratory judgment, seeking to have the court decide whether or not a group of doctors of medicine are entitled to join together to offer their services to a group of persons who choose to purchase them on a prepayment basis. In a preliminary hearing, the court ruled that the action sought by Medical Service should be heard, and that the counterclaim of the podiatrists should not be heard in conjunction with it. This suit is scheduled for hearing next month.

The proposal that the dependents of members of the uniformed services be provided hospital and medical care by other than Government facilities is one which has a great deal of significance in our own area. By the use of concerted and coöperative effort, Blue Shield and Blue Cross Plans have been able to give some assurance to the Congress of the United States that they will be in a position to act as agents for hospitals and physicians in providing such care to the dependents of members of the uniformed services on a locally agreed upon fee basis without additional charge to such dependents. Our own Board has agreed that Medical Service will offer to act as agent for the medical profession in this area, and the District Medical Society is studying the proposal.

---

* This is a summary of the President's Report presented at the Eighth Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, April 25, 1956.

Blue Shield groups which extend into several states are becoming very numerous. The Association of Blue Shield Medical Care Plans has recommended a consistent pattern to be followed in the development of a program which can be offered for national accounts. In large measure, our proposed new program of expanded benefits fits into the recommendations for a program which can be obtained from other Blue Shield Plans by employees of a national account who may be situated in various parts of the country. Perhaps the largest national account which might be obtained is that of the Federal Government. Blue Shield Plans have been unable to develop a program for Federal employees which has any degree of similarity throughout the country, but our efforts here are all in the right direction and promote our real interests.

Inasmuch as the Federal Government may provide Federal employees with major medical coverage which is compatible only with dollar indemnities in the basic plan, your Board of Trustees has approved the development of a major medical program in conjunction with Group Hospitalization. We hope we will thereby be allowed to bid for the coverage of Federal employees in the event the Federal Government passes a bill which will provide only major medical benefits to its employees. It is our hope that the major medical program which we are prepared to write would be the choice of the Federal employee in the Washington area since it is designed to be compatible with his service benefit coverage in Group Hospitalization and Medical Service. The major medical program approved by your Board of Trustees is designed to take up where the surgical, medical care, and diagnostic programs leave off, and does not intrude upon those benefits. It also provides benefits for other medical expenses such as drugs, nursing care, appliances, on a co-insuring basis when such care is no longer available under the basic program.

A committee of the D. C. Dental Society has requested Medical Service to consider expanding its program to provide coverage when oral surgeons perform procedures for which benefits are provided under the surgical schedule. The Board has deferred any action on this matter pending the acquisition of data from other Blue Shield Plans and the Dental Society.

In our efforts to work with various organized medical groups during the past year, it became apparent that it would not be practical to discuss the whole new program with each individual group separately, and we therefore discussed our problems at meetings where many groups were represented. There were indications that some organized medical groups felt they should have individual representation on the Board of Trustees. This problem is still under study by a committee because of the concern that a deliberative body large enough to accommodate all of the various specialized interests in medicine would be less effective in accomplishing its primary purpose of considering the proper policy to be pursued in the interest of medicine as a whole and the public at large. Therefore, the Board recommends the establishment of a committee of from 11 to 25 to be composed of one member each from various organized medical groups to be designated by the Board. This committee will elect its own chairman and secretary, conduct its own business, and make recommendations to the Board of Trustees.

In my annual report to you last year, I included recommendations of the Board of Trustees for the expansion and development of Medical Service to increase income ceilings and fees, add children at an earlier date, cover congenital ailments, extend in-hospital medical care coverage to 180 days, provide benefits for diagnostic and therapeutic services in or out of the hospital on a co-insurance basis, and consider the development of a program to provide major medical benefits. This outline of the program was published in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA as part of my annual report to Participating Physicians last year. During the past 12 months, we have discussed this program with representatives of most of the affected medical groups, conducted a special meeting on the subject to which all Participating Physicians were invited, distributed a summary of the proposed new program to all Participating and Coöperating Physicians, and the Board has now approved the form in which the new program shall be made available to subscribers in the Washington area. It will be offered alongside the old program for a transition period of about 20 months, and during this period both plans would be in operation at the same time.

Out of the experience we have had during the past year, one conclusion becomes inescapable—the eyes of the Nation are focused upon Washington, D. C. in medical economics as well as in politics. The extent to which we in Medical Service can resolve our differences and properly exercise the trust which half a million residents of this area have vested in us will have a profound effect upon the relationship of medicine to the public throughout the entire country. It is not unreasonable to say that the pursuit of impure motives here will be to the discredit of physicians everywhere. On the other hand, it is within our power to exemplify by our own statesmanship and objectivity that type of leadership which will be to the credit of the medical profession throughout the United States.

DONALD STUBBS, M.D., *President*

ANNUAL REPORT ON ADMINISTRATIVE SERVICES OF MEDICAL SERVICE*

I believe the accomplishments of Medical Service during 1955 are noteworthy, and I should like to take a few moments to illustrate the way your administrative staff has kept up with changing events.

Enrollment. At the end of 1955, there were 537,065 participants enrolled, a net gain of 75,970 participants for the year. The success of our enrollment program thus far has created a diminishing pool of potential subscribers, so that it becomes increasingly more difficult to maintain the same enrollment pace as in previous years. However, our enrollment gain in 1955 exceeds the net enrollment gain for any year since 1951, and comes at a time when an expression of public confidence in our program is particularly gratifying. Our local program, while it serves a very small area, has forged ahead in the national enrollment picture. In 1953, Medical Service ranked eighteenth in total enrollment among all Blue Shield Plans; it was seventeenth in 1954, and sixteenth in 1955. The addition of more than 75,000 participants in 1955 exceeded the numbers of participants gained by many state-wide Plans, including Connecticut, California, Minnesota, Wisconsin, and Iowa. Based upon recent estimates of United States civilian state population, Medical Service ranks third among all Blue Shield Plans in the percentage of the population enrolled.

Participating Physicians. At the present time there are 1,869 physicians participating in Medical Service, 1,424 of whom are members of the D. C. Medical Society. At this time last year, 1,745 physicians participated in Medical Service, and there has been a net gain of 124 physicians participating in the program during the past 12 months. The increase in physician participation is most gratifying. The support which Participating and Coöperating Physicians have given to Medical Service in the past has contributed much to the smoothness and efficiency of the Plan's operation. The coöperation of physicians in distributing informative literature to their patients about Blue Cross and Blue Shield coverage has been a real asset to our enrollment department, and the coöperation of physicians in other aspects of our operations represents a service to the Plan and to the community which cannot be evaluated in terms of dollars.

Claims. Increased enrollment and increased physician participation inevitably mean an increase in the work load. During the year, our Claims Department processed 538 claims each working day in addition to handling a daily average of 247 calls by phone or in person which were related to claims problems. We realize that the handling of information of this type is a serious responsibility, and our personnel is especially qualified and trained for this work. The volume and variety of situations with which they are faced from day to day are considerable, and I am confident that they discharge their duties with a high degree of satisfaction.

I should like to take this opportunity to comment on the attitudes and concepts of the people who serve as your administrative agents as they relate to Plan activities and the community which the Plan serves. Medical Service of D. C. is, of course, an independent corporation. Its policy is determined by its own Board of Trustees, the majority of whom are practicing physicians.

In order to administer this Plan's program, a working force had to be created or hired. Medical

---

* Presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, April 25, 1956.

Photos by Dr. Leslie H. French

SPEAKERS AT THE COURSE IN DISASTER MEDICINE

The Medical Society's first Course in Disaster Medicine, held May 21–25, was chairmanned the first evening by (1) Dr. Alfred E. Brigulio, Chairman of the Committee on Emergency Medical Service. Also taking part in the meetings were (2) Dr. James E. Chapman, (3) Dr. Edwin C. Mitchell, (4) Colonel John H. Voegtly, (5) Colonel C. S. Maupin, (6) Dr. S. Ross Taggart, and (7) Dr. Milton C. Cobey. See story on page 398.

Service did not create a working force of employees. In order to efficiently sell its program, collect the necessary payments each month, and process claims for payment, these details were entrusted to an administrative agent. The agent in this case was Group Hospitalization, and this organization was chosen because it was best qualified on two counts: (1) It had the machinery to perform the job; (2) it was dedicated to the same important principles of community service and public interest which were implicit in the establishment of a prepayment medical care plan. Both Group Hospitalization, Inc. and Medical Service have somehow become identified in the public mind as one organization—serving a single purpose—and the employees of Group Hospitalization, who are the administrative agents of Medical Service, are proud to be identified with both these Plans, the sponsoring bodies of which are dedicated to such worthy principles.

Faced as they are with constant interrogation by employers, subscribers, physicians, and patients—and those without patience, they could not function well without a strong feeling of respect for the program they serve. The people who serve as your agent in the administration of this program believe in its equity and its adaptation to the credit economy in medicine. They have served faithfully and well, and they deserve a share in any credit which can be given for an outstanding record of accomplishment in 1955.

George B. McGovern, *Manager*

On the Lighter Side

Columbia Hospital bowling team, after wandering around in the wilderness of bowling oblivion for 15 years, finally, like the children of Israel under Moses, were led into the Promised Land of First Place in the D.C. Medical Bowling League this season. Never in recent years has a "dark horse" entry like Columbia been able to oust the usual leaders and winners, who this year choked in the dust of the winning team off and on from September 23, 1955 through May 11, 1956. The Columbia team bowled prophetically the very first night of the bowling season by posting three wins to lead the League. However, its misfortunes piled high from that night on and by November 18 Columbia was ignominiously holding up the 14-team League in last place.

From that dismal day on, there was a steady climb for the Columbia team, and by April 27 it was tied for first place with indomitable Suburban, captained by Dr. "Andy" Betz. On May 4 Columbia passed Surburban and wore the crown of first place confidently, never to give it up for the remainder of the season.

The next 6 teams in the League were all former champs and runners-up during the past 15 years of the League's existence. Columbia's team had never been higher in the final standing than fifth place, and that occurred only once in the 1948-49 season. Thus hath the mighty fallen and the poor hath taken their place.

The Annual Banquet of the League was held at Brook Farm Restaurant in Chevy Chase, Maryland, on May 24. The team members assembled were wined and dined, and prizes were distributed to members of the winning teams and to individuals. The honored guests present at the banquet were Dr. W. Ross Morris, President of the D. C. Medical Society, and our good friend, Theodore Wiprud, Secretary of the Society.

The entertainment was melodiously supplied by Tiny (Himself) Meeker and his music-makers. Each table was serenaded during the course of the dinner by the Meeker Musicians, and in turn the musicians were subjected to much close harmony by the guests.

The final standing of the prize-winning teams were as follows: No. 1—Columbia won 57, lost 39; No. 2—Suburban won 56, lost 40; No. 3—Prince Georges (last year's second place team) won 56, lost 40; No. 4—Casualty (last year's fourth place team) won 52, lost 44; No. 5—Children's (last season's winners) won 52, lost 44. The following teams finished sixth through fourteenth—Sibley #1 (last year's third place team), George Washington, Sibley #2, Providence, Emergency, Washington Hospital Center (last year's fifth place team), Doctors, Garfield, and Georgetown.

The following prizes were given to the top five teams listed above: Zenith AM-FM table radios to each member of the Columbia team; second place, Suburban team members each received a top grain leather one-suiter; an imported folding camera with an f 1.9 fast lens was given to each member of the third place team, Prince Georges; the fourth place team, Casualty, received leather overnight bags; and the fifth place Children's team members each received a shiny bowling ball containing a miniature liquid dispenser with glasses.

The bowlers who took first place in individual bowling achievement were as follows: High Strikes—Dr. Richard Meyer 58; Paul Duffy 58; Dr. Andrew Betz 54. High Spares for the League: Frank Baiers 254; Dr. Richard Meyer 229; Dr. Andrew Betz 225. High Set: Dr. Charles Hageage 412; Frank Baiers 409; Dr. J. W. Price 406. High Game: Dr. Charles Hageage 190; Dr. Robert Levine 167; Dr. Clyde Reeves 161; Dr. Earl Kadan 160. The three highest individual averages were: Frank Baiers 115, Dr. Richard Meyer 115, and Paul Duffy 112.

The leaders for individual team high average were:

Columbia:	Dr. Earl Kadan 107
Suburban:	Dr. Richard Meyer 115
Prince Georges:	Dr. Charles Hageage 110
Casualty:	Paul Duffy 112
Children's:	Dr. George Resta 111
Sibley #1:	Dr. George Ball 110
George Washington:	Frank Baiers 115
Sibley #2:	Dr. George McLain and Dr. J. Phelps Hand tied 104
Providence:	Dr. Robert Levine 111
Emergency:	Dr. Harold Hawfield 104
Washington Hospital Center:	Dr. Maurice Van Kinsbergen 106
Doctors:	Dr. Allen Lloyd 108
Garfield:	Dr. Duane Richtmeyer 105
Georgetown:	Dr. Gordon MacDonald 109

(Continued on page 410)

News and Personals

MEETINGS

The Medical Society's first **Course in Disaster Medicine,** which was held May 21–25, drew an attendance of approximately 125 physicians.

The course opened on Monday evening, May 21, with a brief outline of the problem by Dr. W. Ross Morris, President of the Medical Society of the District of Columbia. Dr. Morris then turned the meeting over to Dr. Alfred E. Brigulio, Chairman of the Committee on Emergency Medical Service. The following programs were presented on the first 4 evenings:

May 21: Dr. Brigulio, *Moderator*; "Bomb Phenomenology and Weapons Effects Related to Production of Casualties," Colonel John H. Voegtly, Chief of the Department of Atomic Casualties Studies, Walter Reed Army Institute of Research; "Radiation, Fallout, Detection, Pathology of Ionizing Radiation; Treatment of Radiation Casualties," Lt. Colonel James T. Brennan, Radiological Service, Walter Reed Army Hospital; "Calculation of Casualties," Colonel C. S. Maupin, Special Assistant to the Surgeon General of the Army (Nuclear Energy).

May 22: Dr. Milton C. Cobey, *Moderator*; "Principles of Management of Mass Casualties, Including Survival Care and Sorting," Lt. Colonel Joseph D. Goldstein, Assistant Chief, Department of Atomic Casualties Studies, Walter Reed Army Institute of Research; "Débridement, Fracture, Burns, Infection and Antibiotics," Colonel Joseph R. Shaeffer, Surgical Consultant to the Surgeon General of the Army; "Analgesia, Anesthesia, Resuscitation," Colonel Harvey Slocum, Department of Anesthesia, Walter Reed Army Hospital.

May 23: Dr. James E. Chapman, *Moderator*; "Experience of Civilian Medical Facilities in Disaster," Mr. Harry B. Williams, Technical Director, and Miss Jeannette F. Raynor, Staff Associate, Committee on Disaster Studies, National Academy of Sciences, National Research Council; "Psychiatry in Mass Casualties," Colonel Albert J. Glass, Chief, Department of Neuropsychiatry, Walter Reed Army Institute of Research; "Mobile Medical Team, Operation 'Mercy,'" Dr. James R. Schofield, National Coördinator of Medical Education for National Defense, Bureau of Medicine and Surgery, Department of the Navy.

May 24: Dr. Edwin C. Mitchell, *Moderator*; "The Federal Civil Defense Program," Dr. S. J. Reisman, Regional Medical Administrator, Federal Civil Defense Administration; "'Operation Hoya'—Disaster Exercise at Georgetown University Hospital," Dr. James E. Fitzgerald, Coördinator, Medical Education for National Defense Program, Georgetown University School of Medicine; "Medical Emergency Disaster Service for the District of Columbia," Dr. Edwin C. Mitchell, member, Committee on Emergency Medical Service; "Use of Paramedical Personnel under Disaster Conditions; Delegation of Technic," Dr. S. Ross Taggart, Assistant Deputy Director, District of Columbia Office of Civil Defense (Medical and Health Services).

On Friday evening Dr. Taggart discussed "The Evacuation Hospital as a Disaster Hospital." Members of his National Guard Unit guided physicians on a tour of the Upshur Street Hospital, which is serving presently as a disaster hospital in the Washington area.

On June 5, at special ceremonies in the Medical Society's building, the 45 physicians who completed the course were enrolled as charter members of the Medical Emergency and Disaster Service (MEDS).

The Course in Disaster Medicine will be repeated in the fall.

The Second Annual Scientific Seminar of The Alumni Association of the Episcopal Eye, Ear and Throat Hospital, held on May 12 at the Hotel Statler, was attended by about 100 members and guests.

Mr. H. L. Rust, First Vice President of the Hospital, opened the general meeting with a discussion of the Hospital's role in the new Washington Hospital Center; Dr. Hugh O. House spoke on "The Uses of the Allergy Clinic."

Following these two papers, members and guests divided into three sectional meetings, i.e., ophthalmology, otolaryngology, and oral surgery. Papers were presented before the Section on Ophthalmology by Drs. L. Connor Moss, Hubert B. Haywood, Jr., Melvin G. Alper, Frank D. Costenbader, G. Victor Simpson, and Dan G. Albert. A Clinico-pathologic Conference by members of the Department of Ophthalmic Pathology closed the day's program.

The Section on Otolaryngology was addressed by Drs. William H. Jenkins, Harry Porter, E. E. Llamas, Harry McCurdy, and Frasier Williams.

Appearing before the Section on Oral Surgery were Drs. M. Joseph Reitman, Lee Sacket, Jerome Bernstein, Harry Ferris, and Robert O'Brien.

The closing social event was a dinner at the Mayflower Hotel with Dr. Peter N. Lombard acting as toastmaster. Mr. George L. Carroll, of the Office of Special Investigations, United States Air Force, gave the principal address. Silver trays were presented to Drs. William H. Jenkins and Dan B. Moffett as tokens of appreciation for the many years of service both have contributed to Episcopal Hospital.

The Association of Former Internes and Residents of Freedmen's Hospital held its 34th Annual Session at Howard University, June 5–7.

Much of the scientific program was presented by members of the District Medical Society. On the opening day, Dr. Harry Lee Claud conducted a panel discussion on "The Medical and Surgical Aspects of Gallbladder Disease," with the following participants: Drs. Robert W. Sjogren, Paul S. Putzki, Charles E. Bickham, Jr., and Oscar B. Hunter, Jr. In the afternoon, Dr. Carl Berg and Dr. Maurice Protas both conducted panel discussions. Dr. Berg presented the subject, "The Painful Back," with the assistance of Drs. William J. Tobin, Arthur A. Morris, Edwin Davis, Jr., and Darrell C. Crain. Dr. Protas led discussion on "Successful Treatment of Diabetes." Drs. Jacob Weinstein, Donald Stubbs and William Kurstin assisted Dr. Protas in the discussion of diabetes. On June 7, Dr. A. A. Marchetti presented a paper on "Obstetrical Forceps—Its Operation and Use."

Dr. John B. Johnson, retiring President of the Association, and Dr. Mitchell W. Spellman were co-authors of a paper on "Congenital Heart Disease in Adults with Particular Reference to Interatrial Septal Defects Diagnosis and Management." On Thursday, a panel discussion, with Dr. Clarence S. Greene as moderator, was presented on "Cancer of the Colon." Panelists were Drs. Robert S. Jason, Burke Syphax, T. W. Davis, and R. Kelley Brown. A paper entitled, "The Hermaphrodite," was presented by Drs. W. Lester Henry and R. Frank Jones.

Dr. Jason, Dean of the Medical School, is the new President of the Association.

The Annual Meeting of the District Tuberculosis Association and the District Trudeau Society was held at the National Press Club, May 14. Dr. Esmond Long, Editor of the *American Review of Tuberculosis* and Chairman of Medical Research for the American Trudeau Society, gave the principal address. Dr. James J. Feffer, President of the Association, stated in his annual report that by order of the District Director of Public Health, Dr. Daniel L. Seckinger, all tuberculosis clinical activities of the District of Columbia will be put under the direction of Glenn Dale Hospital as of July 1.

Elected to the Board of Directors for a 3-year term were Drs. Feffer, I. Phillips Frohman, Clarence Lee Miller, and J. Winthrop Peabody. The Board elected the following officers on May 16:

Dr. Feffer, *President*; the Reverend Andrew Fowler, *Vice President*; Mrs. Joseph C. Monaghan, *Secretary*; and Bernard L. Amiss, *Treasurer*.

Newly elected members of the Executive Committee are Drs. Otis R. Farley, Howard M. Payne, and Mr. Frank A. Gunther.

The George Washington University Medical Society elected the following new officers, May 23:

Dr. Donald H. Leeper, Jr., *President-elect*; Dr. Helen Gladys Kain, *First Vice President*; Dr. Frederick Y. Donn, *Second Vice President*; Dr. J. Roscoe Creer, *Secretary*; and Dr. Naomi M. Kanof, *Treasurer*.

Dr. Richard H. Fischer assumed the duties of the presidency on July 1. Dr. Robert R. Montgomery, the retiring President, was elected to the Society's Council for a 3-year term.

The Women's Medical Society of the District of Columbia elected the following officers at its meeting, May 1:

Dr. Shirley S. Martin, *President-elect*; Dr. E. Anne D. Mattern, *Recording Secretary*; Dr. Vita R. Jaffe, *Corresponding Secretary*; and Dr. Inez E. Wilber, *Treasurer*.

Dr. Claudine M. Gay will serve as President during the year 1956–57.

The Jacobi Medical Society held its last dinner meeting of the season on May 21 at the Willard Hotel. The program consisted of a Sports Symposium, in which Messrs. Morrie Siegal, Herbert

Hess, sports writers, and Jack Girvin, golf professional, participated. New officers were elected. They are:

Dr. Sydney Ross, *President-elect*; Dr. Jack L. Derzavis, *Vice President*; Dr. Melvin O. Goodman, *Secretary*; and Dr. Stanley W. Kirstein, *Treasurer*.

Dr. Monroe J. Romansky took office as President and will serve during 1956–57.

GENERAL NEWS

The regular meeting of the **Executive Board of the Medical Society of the District of Columbia** was held on May 28, 1956. Approval was given for distribution to the membership of copies of a brochure, captioned "Protect Your Family Against Poisoning," which has been developed by the Food and Drug Administration of the Department of Health, Education and Welfare.

Dr. Margaret Mary Nicholson, Washington pediatrician, was selected to receive the Certificate for Meritorious Service, to be presented at the evening session on District of Columbia Day, November 12, which is the opening day of the Annual Meeting of the Southern Medical Association. The John Benjamin Nichols Award for 1956 will be presented to Mr. Joseph H. Himes, President of Group Hospitalization, Inc. This award, which is given each year to a layman or organization that has made an outstanding contribution to the betterment of health of the people of the District of Columbia, will also be presented on D. C. Day.

Dr. Josephine Renshaw and Dr. Milton M. Greenberg were appointed delegates to the Health Section of United Community Services for 1956–57. This was a reappointment for Dr. Renshaw. Dr. Greenberg replaces Dr. Yater, who did not wish to be reappointed.

Dr. Forrest V. Schumacher was appointed to succeed Dr. Alfred A. J. Den, who resigned recently from the Committee on Professional Liability Insurance. Dr. Robert E. Moran, a member of the Committee, was appointed to succeed Dr. Den as Chairman.

Dr. Edward W. Nicklas was appointed to succeed Dr. Den as a member of the Grievance Committee.

The Southeastern Surgical Congress announces its **Annual Prize Scientific Paper Award for 1957.** The author of the best contribution on surgery or allied subjects will be awarded $100 and expenses to attend the next annual meeting of the Congress in St. Petersburg, Florida, April 1–4, 1957, where he will receive the award. Three copies of the paper should be sent to the Councilor of the state in which the resident is living before December 1, 1956. The Councilor for the District of Columbia is Dr. Harry Lee Claud, 1835 Eye Street, N. W. The Southeastern Surgical Congress reserves the right to submit the paper to the Editorial Board of its official publication, *The American Surgeon*, for publication.

The Washington Academy of Neurosurgery was formally organized on May 8, 1956. The following officers were elected: Dr. William T. Spence, President; Dr. Jonathan M. Williams, Secretary; Dr. O. Hugh Fulcher and Dr. James W. Watts, members of the Executive Committee. The charter members are, in addition to those elected to office: Drs. Harvey Ammerman, John P. Gallagher, Vasilios S. Lambros, Arthur A. Morris, James P. Murphy, Hugo V. Rizzoli, and Garrett Swain.

The Academy had its beginning about 5 or 6 years ago when the qualified neurosurgeons in Washington met periodically for informal discussions of their problems and presentations of scientific papers. By adopting a constitution, the organization takes on a more formal character.

The purpose of the Academy is to improve the care of the neurosurgical patient in this vicinity, to improve neurosurgical teaching to medical students, interns, residents and members of the hospital staffs, and, in general, to coöperate with the Medical Society of the District of Columbia in the furtherance of better medical care in this community.

The District of Columbia Division of the American Cancer Society, Inc., reports that the Cancer Answer Program conducted by telephone during the winter and spring months has been a popular service with the public. The Cancer Answer Program has been a regular Monday night feature from 7 to 8 p.m. over Executive 3-3690. Different doctors have participated, answering sometimes as many as 40 questions an evening. Although intended as an educational service for the public, comments from participating physicians have indicated that they have found it instructive also.

Doctors who have contributed their services since January, 1956 are: Drs. Earl B. Barnes, Thomas Bradley, Willard C. Camalier, Jr., Charles Warfield Clark, John F. J. Clark, Paul B. Cornely, J. Keith Cromer, Abraham W. Danish, Herbert S. Gates, John P. Haberlin, William P. Herbst, Jr., Norman H. Isaacson, Caroline Jackson, Calvin T. Klopp, Emmett P. Madigan, Thomas M. Peery, Robert S. Smith, Ralph D. Whitley, and Theodore Winship.

A special TV program was held, April 21, during Cancer Crusade Month over WTTG. Dr. Charlotte P. Donlan, radiotherapist at George Washington University Hospital, was moderator. The panelists for this program were Drs. Ralph M. Caulk, Paul B. Cornely, Cecile Fusfeld, and Ernest Gould. The panel physicians answered questions submitted to them by telephone.

The George Washington University School of Medicine held **Precommencement Ceremonies,** June 5, in the auditorium of the District Medical Society. Dr. Walter A. Bloedorn, Dean of the School of Medicine, administered the Oath of Hippocrates to the 88 members of the graduating class.

Dr. Leland W. Parr, Professor of Bacteriology, gave the principal address on the subject, "The Way Ahead."

Oscar I. Dodek, Jr., received the John Ordronaux Prize of $150, which is awarded annually to the member of the graduating class of the School of Medicine who has the highest scholastic standing.

Dr. Luther W. Snyder, Past President of the George Washington University Medical Society, presented the $100 Oscar B. Hunter Award in Pathology to Lawrence Joseph Eanet for having demonstrated outstanding ability in pathology. The Jacobi Medical Society Award of $50, presented by Dr. Monroe J. Romansky, Associate Professor in Medicine, went to Ben Feather for his work in pediatrics. For an outstanding thesis on obstetrics and gynecology, Myron Don George received the Howard F. Kane-A. F. A. King Obstetrical Award.

The Mosby Scholarship-Book Awards were presented to the six members of the graduating class with the highest scholastic standing. They were: Messrs. Dodek, Eanet, George, Roger Boles, Herbert L. Kotz, and Lawrence I. Zaroff.

CONGRATULATIONS TO AND FROM DR. DODEK

Dr. Samuel M. Dodek (left) congratulates his nephew, Oscar Irving Dodek, Jr., to whom he has just presented the John Ordronaux Award. The award is given each year to the graduate of George Washington University School of Medicine with the highest scholastic standing. Dr. Samuel Dodek is on the faculty of the University as Associate Clinical Professor of Obstetrics and Gynecology.

George Washington University School of Medicine has received an unrestricted grant of $500,000 from The Commonwealth Fund.

George Washington was one of 7 schools selected for grants, which varied in amounts from a half to a million dollars. In making available these sums, the Fund "recognizes the urgent and increasing need for funds for strengthening faculties and raising teaching salaries, clarifying educational objectives, reviewing curriculums and re-structuring programs of medical education."

The Commonwealth Fund was established by the late Mrs. Stephen V. Harkness in 1918. In recent years its primary interests have been in the field of health, particularly in medical education, medical research, and community health services.

The Greater Southeast Community Hospital Foundation, Inc., has selected an 8½-acre tract at Mississippi Avenue and Wheeler Road, S.E. as the site of the new Southeast Community Hospital. Plans call for a 250-bed structure, to be built at a cost of about $6 million, to serve patients in Southeast Washington and the southern portion of Prince Georges County. Dr. Otis R. Farley, an Associate member of the District Medical Society, is one of three Vice Presidents of the Foundation. On the Board of Trustees is Dr. Frank S. Pellegrini, an Active member of the D. C. Medical Society.

Mr. Edward R. Loveland, of Philadelphia, for more than 30 years **Executive Secretary of the American College of Physicians,** was elected an honorary Fellow of the College, the only layman so honored, at the Annual Session of the College in Los Angeles, April 16–20.

PERSONALS

The appointment of **Dr. Hugh H. Hussey** as Director of the Department of Medicine of Georgetown University School of Medicine, succeeding **Dr. Harold Jeghers,** was announced on May 17. Dr. Hussey, who has been a member of the Georgetown faculty for over 20 years, will assume his new duties on August 1.

Dr. Hussey

Dr. Hussey has achieved wide recognition both in and beyond the Washington Metropolitan Area because of his contributions to medical education and his activity in medical organizations. As Medical Editor of GP, the official publication of the American Academy of General Practice, his writing and teaching abilities have had wide scope. His services to the District Medical Society are numerous. He is its senior delegate to the House of Delegates of the American Medical Association, a member of its Executive Board, a member of the Editorial Board of the MEDICAL ANNALS, a member of the Medical Advisory Committee to the D. C. Department of Health, the Council on Rehabilitation, and Chairman of the newly formed Committee on Hospitals. In 1953 he was appointed by the District Commissioners to the Public Health Advisory Council.

Dr. Hussey received both his Bachelor of Science and Doctor of Medicine degrees from Georgetown. He has been a member of its teaching staff in internal medicine since 1936; head of the Georgetown Service of the District of Columbia General Hospital since 1946; and in 1953 he was named Professor of Preventive Medicine and Public Health.

Dr. Jeghers resigned the post of Professor of Medicine to develop a similar department in the newly established medical school at Seton Hall University in Jersey City. He came to Georgetown in 1946 as Professor of Medicine and reorganized the Department of Medicine and the teaching technics of the Medical School. He will remain as consultant to the Department of Internal Medicine at Georgetown.

Dr. Jehgers is a graduate of Rensselaer Polytechnic Institute. He received his medical degree in 1932 from Western Reserve University School of Medicine. He was Director of the Medical Service at the Boston City Hospital for many years and was also Associate Professor of Medicine at Boston University School of Medicine.

A testimonial dinner was held at the Columbia Country Club, May 29, in honor of **Dr. John Hugh Lyons,** who recently relinquished his administrative duties at Emergency Hospital to become Emeritus Chief and Senior Consultant to its Department of Surgery. The dinner was attended by some 200 staff members and friends of Dr. Lyons.

Dr. Crenshaw D. Briggs, Chief of Surgery, presided at the dinner and acted as toastmaster. Dr. Henry L. Darner, Chief of Gynecology, and Dr. Arch L. Riddick, attending staff surgeon at Emergency, traced Dr. Lyons' medical career from childhood. Dr. James N. Greear, of Reno, Nevada, was present and paid high tribute to his former colleague. A silver service was presented Dr. Lyons in behalf of those present by Mr. F. Moran McConihe, President of the Hospital, as a token of their esteem and a memento of the occasion.

Dr. Weston Bruner, Jr., Chief of Anesthesia, was in charge of arrangements for the dinner and program.

Dr. Robert E. Moran has been elected to serve on the Examining Board of the American Board of Plastic Surgeons for a 6-year period. The election took place, May 17, in Toronto, Canada, during the Annual Meeting of the American Association of Plastic Surgeons. Dr. Moran presented a paper before the meeting on "Levathor Spasm—a Factor in Exophthalmos—and Its Correction."

Dr. Ross T. McIntire, Executive Director of the International College of Surgeons, was honored by President Eisenhower for his outstanding work in organizing and developing the President's Committee on Employment of the Physically Handicapped. A citation in the form of a scroll was presented to him at a luncheon in Washington on May 19, when the Committee held its annual meeting.

Dr. McIntire developed the idea of the Committee during the years, 1944 to 1947, when he and other physicians endeavored to rehabilitate disabled servicemen of World War II. He was made Chairman of the Committee when it was founded in 1947. Since resigning the chairmanship in 1954, he has served as a member of the Committee.

Dr. McIntire is an Honorary member of the District Medical Society.

Dr. Thomas McPherson Brown, Professor of Medicine of George Washington University School of Medicine, received a citation for outstanding service from the District Commissioners' Committee on Employment of the Physically Handicapped. The presentation was made in the Main Conference Room of the Hospital, June 11. Dr. Brown was recognized for his work in establishing arthritis clinics and laboratories for the treatment of crippling diseases and for the rehabilitation of afflicted patients. He established the arthritis clinic at Mt. Alto Veterans Hospital, the first of its kind in the Washington area, and the research laboratory at George Washington University Hospital, the first to be established in a non-governmental institution.

Dr. Elizabeth S. Kahler was elected President-elect of the American Medical Women's Association at its Annual Meeting in Chicago, June 7–10, at the Sheraton-Blackstone Hotel.

Dr. Kahler

Dr. Kahler, a Washingtonian, is engaged in private practice at 3828 Fulton Street, N.W. She is Past President of the Women's Medical Society of D. C. She also has taken part in the activities of the national organization; she was regional director for a year and more recently director of junior membership.

Dr. Kahler graduated in medicine from George Washington University in 1940, having previously received the degrees of Bachelor of Science and Master of Arts from the same institution. In private life, she is the wife of Dr. Ervin N. Chapman. Both physicians are Active members of the D. C. Medical Society and both take an active part in the work of the National Presbyterian Church.

The AMWA has a membership of approximately 1,500 women physicians at the present time. Attending the meeting in Chicago as delegate from Branch One (Washington Chapter) was **Dr. Josephine Renshaw.**

Dr. William P. Herbst was elected President of the American Urological Research Foundation at its Annual Meeting in Boston, May 27.

Rear Admiral Bartholomew W. Hogan, Surgeon General of the U. S. Navy, received the honorary degree of Doctor of Science from Marquette University in Milwaukee, Wis., June 3. Admiral Hogan is an Honorary member of the District Medical Society.

Dr. Daniel L. Seckinger notified the District Commissioners, June 8, that for "reasons of health" he wished to retire from his post as Director of Public Health on January 31, 1957. Dr. Seckinger

CAT.

served as Assistant Health Officer of the District for 14 years before he took over as Director in 1949.

Dr. Preston A. McLendon, Professor of Pediatrics at George Washington University School of Medicine, took part in the Seventh Annual Seminar of the Miami Pediatric Society, May 9–11, held at the Jackson Memorial Hospital in Miami, Florida. "Problems of the Newborn Period" was the theme of the meeting.

The entire Seminar was presented by Dr. McLendon and two other physicians, Dr. Robert E. Gross and Dr. Stewart H. Clifford, both of the Harvard Medical School. Dr. McLendon presented four papers: "Child-Parent Relationships," "Growth and Development (Physical and Emotional)," "Feeding," and "Child Environment Relationships (Home)." All three physicians took part in a Conference Summary at the close of the 3-day meeting.

Dr. Irving B. Brick, Associate Professor of Medicine, Georgetown University School of Medicine, was invited to speak before the Medical Society of New Jersey in Atlantic City, May 16. Dr. Brick spoke on "The Modern Treatment of Portal Cirrhosis."

George Washington University conferred the status of Professor Emeritus on seven of its faculty members at commencement exercises, June 6. Among them were three members of the District Medical Society: **Dr. Roger M. Choisser,** Professor of Pathology; **Dr. William H. Jenkins,** Clinical Professor of Otolaryngology; **and Dr. Daniel B. Moffett,** Professor of Otolaryngology.

Dr. Choisser, a graduate of Rush Medical College, served on the staff of the Medical School from 1921 to 1926, when he left for service in the U. S. Navy in World War I. During the Haitian Rebellion he was placed in charge of the public health laboratory on Haiti. He returned to the faculty of George Washington in 1929 and has served continuously since that time. In World War II he founded and headed the District Civilian Defense Blood Plasma Bank.

Dr. Jenkins and Dr. Moffett, both graduates of the University of Maryland School of Medicine, have served on the faculty since 1932.

Dr. Russell J. Fields has received an honorary life membership in the American Social Hygiene Association. The award is made each year in recognition of outstanding contributions to the social hygiene

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
April 11	Dr. Julius Schreiber	Dealing with the Emotional Problems of the Middle Years	Alexandria Temple Sisterhood
April 12	Dr. Julius Schreiber	Living in an Age of Anxiety	Congregation Beth-El, Chevy Chase, Md.
May 10	Dr. Julius Schreiber	Courtship and Marriage	Young Adult Forum, Adas Israel Congregation
May 20	Dr. Julius Schreiber	Mental Health and the Community	Supper Club, St. John's Episcopal Church
May 25	Dr. Richard M. Auld	Retarded Children	Fairfax County Association for Retarded and Handicapped Children
May 28	Dr. Aaron G. Saidman	Insulin Reaction	Lay Society, District of Columbia Diabetes Association

movement. Dr. Fields, dermatologist and syphilologist, has been President of the District Social Hygiene Society for the last two years and has served on its Board of Directors for 27 years. He received the award at the Annual Luncheon of the Society at the Carlyle Hotel, May 24.

Dr. Isadore Rodis, Washington psychiatrist, was honored by the Eastern High School Alumni Association, May 29. Dr. Rodis received a Certificate of Merit from Mr. Lynn F. Woodworth, Principal of Eastern High School, in behalf of the Alumni Association. Other Eastern graduates honored by the Association at the reunion were Dr. W. Paul Briggs, Secretary and Executive Director of the American Foundation for Pharmaceutical Education, and Dr. John E. Faber, Jr., head of the Department of Bacteriology at the University of Maryland.

Dr. Monroe J. Romansky, Associate Professor of Medicine, George Washington University School of Medicine, was Visiting Chief at the Atlantic City Hospital in Atlantic City, New Jersey, for the week of May 6 to 13.

Dr. Harry Lee Claud presented a paper on "Surgery of the Biliary Tract" before the Section on Surgery during the Centennial Meeting of the Mississippi State Medical Association in Jackson, May 8-10.

Dr. George Maksim, as official representative of the American Academy of Pediatrics, took part in the President's Conference on Fitness of American Youth, held in Annapolis, Md., June 18-19. The official invitation for the Conference was extended to Dr. Harry Bakwin, President of the Academy. Dr. Bakwin was unable to attend and appointed Dr. Maksim as his representative.

Dr. Catherine W. Johnson and Dr. John F. J. Clark were among the physicians certified by the American Board of Obstetrics and Gynecology on May 20, 1956.

Dr. Laszlo Ormandy was invited to address the Fairfax County Medical Society, June 12. He presented a paper on "Common Disorders of the Foot in Adults and Children."

Drs. Edmund F. Daley, Charles A. Millwater, Robert C. Rush, and Francis T. Sharpe have been elected to the Board of Trustees of the Catholic Youth Organization of Washington. Dr. Leo B. Gaffney, President of the CYO, made this announcement, June 9.

Dr. William Calhoun Stirling returned from two months in Europe early in June. While abroad he attended urological clinics in Rome and Paris.

BOOK REVIEWS

Cancer Cells. E. V. Cowdry, Director, Wernse Cancer Research Laboratory, Washington University, St. Louis; formerly President, American Association for Cancer Research and Fourth International Cancer Research Congress; President, American Gerontological Society and Second International Gerontological Congress. Price, $16.00. Pp. 677, illustrated. Philadelphia: Saunders, 1955.

This remarkable book by a long established authority in the fields of cancer and geriatrics is an attempt at bringing together and evaluating our present knowledge of the cancer cell. The sources of information range over morphology, physiology, cytochemistry and cytophysics, carcinogenesis from all points of view (chemical, physical, infectious, genetic mutation), susceptibility to cancer, and brief summaries of cancer prevention, diagnosis and treatment. The final paragraphs on cancer research are a penetrating commentary on that field.

In performing this difficult synthesis of information, Dr. Cowdry has not written for the specialist or the research scientist, but has directed his efforts toward an exposition for the intelligent biologist and physician. In doing so, even the specialist in one of the fields of cancer work will find that the author has brought to him a wealth of information from related fields.

In this one volume, there is an enormous amount of information and comment. It cannot fail to excite the reader as the many vistas of cancer study are revealed by a discriminating guide. At the very least, the reader will gain a broadened insight into the biology of cancer. For those who would read further on any subject, there is an exhaustive modern bibliography which will serve to lead the interested into the field.

The only reservation regarding this book is that theory and fact are closely apposed to one another, and the unwary may lose the distinction between them. This is a minor point in the face of a very valuable book.

A word must be added to mention Dr. Cowdry's literary style. It is a pleasure to read, particularly in this era of scientific obscurantism.

DANIEL L. WEISS, M.D.

Therapy of Fungus Diseases—An International Symposium, presented June 23, 24, 25, 1955, by The Division of Dermatology, Department of Medicine, School of Medicine and Medical Extension, University Extension, University of California at Los Angeles. Edited by THOMAS H. STERNBERG, M.D., Professor of Medicine (Dermatology) and Assistant Dean for Postgraduate Medical Education, AND VICTOR D. NEWCOMER, M.D., Associate Professor of Medicine (Dermatology). Price, $7.50. Pp. 337. Boston: Little, 1955.

This book represents an edited account of an international symposium on fungus infections held in this country in June, 1955. The title is somewhat misleading; actually many of the 50 odd papers are concerned with ecology, pathogenicity and other laboratory aspects of fungi. These are fortunate additions since the status of the present chemotherapy of mycotic infections scarcely warrants the publication of a book.

There are a number of interesting and undoubtedly important bits of information cited in the various articles. The soil is a natural reservoir for 21 human pathogenic fungi. The occurrence of the superficial mycoses is related to the susceptibility of the individual rather than the virulence of the organism. Screening procedures have shown that drugs with high activity versus fungi in vitro may have no effect in animals or may be too toxic, or may be ineffective in vitro and still be valuable in animals. In drug testing there is a need to use multiple organisms, a need to check media for fungal inhibitors, and a need to use the same growth phase of the organism as occurs in the body. Besides cortisone, estradiol is another hormone that enhances fungus infection in mice. *Cryptococcus neoformans* has been frequently isolated from old pigeon nests and droppings, a hitherto unrecognized source of this pathogenic fungus. All soils will support the growth of *Coccidioides immitis* and thus there is no answer as to why certain desert areas are the only present source of human infections.

Articles dealing with the above points seemed much more valuable to this reviewer than the variety of data on therapy in mycoses. To the physician inundated with literature on antifungal agents, however, this is an up-to-date survey pointing out the markedly limited value of such therapy.

It was of additional interest to note the predominant role that dermatologists played in the papers presented. One has the feeling that this book in only a small way reflects what must have been an exciting symposium since it attracted over 200 international scientists into an atmosphere of personal exchange of ideas.

THOMAS M. GOCKE, M.D.

Basic Surgical Skills—A Manual with Appropriate Exercises. ROBERT TAUBER, M.D., F.A.C.S., Assistant Professor of Gynecology and Obstetrics, the Graduate School of Medicine, University of Pennsylvania; Senior Attending Physician in Obstetrics and Gynecology, The Albert Einstein Medical Center; Chief in Gynecology of the Kensington Hospital; Diplomate of the American Board of Obstetrics and Gynecology. Price, $3.75. Pp. 75, illustrated. Philadelphia: Saunders, 1955.

Dr. Tauber believes that the "surgeon must train his fingers in a similar way as a musician—by persistent practicing of well selected exercises." With this as a guiding principle, he has designed a training board and describes some 43 different exercises for the reader to practice. The publisher, with the coöperation of a Suture Company, makes the Training Board available to buyers of the book.

The chosen exercises are fundamental in scope and are well demonstrated by line drawings that are clear and simple. Anyone who follows the instructions and practices diligently will achieve skill. For this reason the book should have an appeal for students, trainees, and young surgeons.

The author succeeds in his intention to offer a contribution to surgical treatment. His brief and unique monograph cannot fail to raise the level of surgical technic of anyone exposed to it.

LINWOOD L. RAYFORD, JR., M.D

Life Stress and Essential Hypertension—A Study of Circulatory Adjustments in Man. STEWART WOLF, M.D., Professor and Head, Department of Medicine, University of Oklahoma School of Medicine; Supervisor of Clinical Activities, Oklahoma Medical Research Foundation; PHILIPPE V. CARDON, JR., M.D., Senior Assistant Surgeon (R), USPHS, National Institute of Mental Health, National Institutes of Health, Bethesda, Md.; Instructor in Medicine, Georgetown University School of Medicine; EDWARD M. SHEPARD, M.D., Instructor in Medicine, Cornell University Medical College; Assistant Attending Physician, New York Hospital; AND HAROLD G. WOLFF, M.D., Professor of Medicine (Neurology), Cornell University Medical College; Attending Physician, New York Hospital. Price, $7.50. Pp. 253. Baltimore: Williams & Wilkins, 1955.

This volume analyzes and correlates the effect of stressful situations and ordinary wear and tear of daily life on the cardiovascular function of 216 patients. That a bout of anger or a stressful interview or a frightening experience can elevate arterial pressure has been known for many years, but no attempt has been made to measure the damage to the vascular system caused by such trauma to the psyche until the present study by Dr. Wolf.

The significance of all these findings is not clear but there is nothing incompatible with the view that the life adjustments in individuals with essential hypertension involve initially renal ischemia which may in turn set off a variety of endocrine and other humoral mechanisms with the ultimate development of irreversible tissue damage. In any case it is clear that stressful life experiences are sufficiently prominent among stimuli to elevated arterial pressure to warrant their serious consideration in the clinical management of patients with essential hypertension. The evidence of emotional restraint and the calm exterior often displayed by these patients make it necessary for the physician to exercise special diligence and skill in uncovering meaningful life experiences and the attitudes and reactions associated with them.

The authors are relating data from their own laboratory and not merely giving a summary or an interpretation of other people's experience. Concise case histories followed by pertinent comments enable the reader to quickly grasp the significance.

The volume is well organized, the data are presented logically, and conclusions drawn conservatively. This volume truly gives an understanding into the emotional background of the hypertensive patient and for the first time correlates this with the abnormal hemodynamics. It is to be highly recommended not only for the cardiovascular investigator but for any physician who manages patients with essential hypertension.

FRANK A. FINNERTY, JR., M.D.

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional current books which, in their opinion, merit comment.

Clinical Recognition and Management of Disturbances of Body Fluids, 2nd ed. JOHN H. BLAND, M.D., Associate Professor of Medicine, University of Vermont College of Medicine. Price, $11.50. Pp. 522, with 109 illustrations. Philadelphia: Saunders, 1956.

The Truth About Cancer. CHARLES S. CAMERON, M.D., Medical and Scientific Director, American Cancer Society. Price, $4.95. Pp. 268. New York: Prentice-Hall, 1956.

A Follow-up Study of World War II Prisoners of War. BERNARD M. COHEN, Ph.D., Statistician, Follow-up Agency, Division of Medical Sciences, National Research Council, Washington, D. C., AND MAURICE Z. COOPER, M.D., Department of Medicine and Surgery, Veterans Administration, Washington, D. C. Price, $1.50. Pp. 81. Washington, D. C.: U. S. Government Printing Office, 1954.

Bellevue Is My Home. SALVATORE R. CUTOLO, M.D. with ARTHUR AND BARBARA GEIB. Price, $4.00. Pp. 317. New York: Doubleday, 1956.

Christopher's Textbook of Surgery, 6th ed. Edited by LOYAL DAVIS, M.D., Chairman of the Department of Surgery, Northwestern University Medical School. Price, $15.50. Pp. 1484, with 1359 illustrations on 716 figures. Philadelphia: Saunders, 1956.

A Modern Pilgrim's Progress for Diabetics. GARFIELD G. DUNCAN, M.D., Clinical Professor of Medicine, Jefferson Medical College; Director of the Medical Divisions of the Pennsylvania Hospital and the Benjamin Franklin Clinic, Philadelphia. Price, $2.50. Pp. 222. Philadelphia: Saunders, 1956.

Laboratory Tests in Common Use. SOLOMON GARB, M.D., Assistant Professor of Clinical Pharmacology, Cornell University Medical College. Price, paper, $2.00. Pp. 160. New York: Springer, 1956.

Diseases of the Chest. H. CORWIN HINSHAW, M.D., Ph.D., Clinical Professor of Medicine, Stanford University School of Medicine, AND L. HENRY GARLAND, M.B., B.Ch., Clinical Professor of Radiology, Stanford University School of Medicine. Price, $15.00. Pp. 727, with 634 illustrations on 288 figures. Philadelphia: Saunders, 1956.

Arteriosclerosis; a Symposium Presented by the Minnesota Heart Association and the University of Minnesota, September 7, 8 and 9, 1955. ANCEL KEYS, Director, Laboratory Physiological Hygiene, University of Minnesota. Pp. 186. St. Paul, Minn.: Minnesota Heart Association.

The Neuroses in Clinical Practice. HENRY P. LAUGHLIN, M.D., Assistant Clinical Professor of Psychiatry, George Washington University School of Medicine; Head, Psychiatry and Neurology Division, Suburban Hospital, Bethesda, Maryland; Consultant in

Psychiatry, Walter Reed Army Medical Center. Price, $12.50. Pp. 802. Philadelphia: Saunders, 1956.

Tuberculosis in the Army of the United States in World War II. An Epidemiological Study with an Evaluation of X-ray Screening. Esmond R. Long, M.D., Director, The Henry Phipps Institute, University of Pennsylvania, Philadelphia, Pennsylvania, and Seymour Jablon, A.M., Statistician, Follow-up Agency, Division of Medical Sciences, National Research Council, Washington, D. C. VA Medical Monograph, May 1, 1955. Price, $1.50. Pp. 88. Washington, D. C.: U. S. Government Printing Office, 1956.

A Course in Practical Therapeutics, 3rd ed. Martin Emil Rehfuss, M.D., F.A.C.P., LL.D. (Hon.), Professor of Clinical Medicine, Emeritus, and Director of the Division of Therapeutics in the Department of Medicine, The Jefferson Medical College, Philadelphia; Attending Physician, The Jefferson Medical College Hospital, Philadelphia, and Alison Howe Price, A.B., M.D., Associate Professor of Medicine, The Jefferson Medical College, Philadelphia; Assistant Physician to The Jefferson Medical College Hospital, Philadelphia; Chief Clinical Assistant, Diabetic Clinic, Curtis Clinic, Philadelphia. Price, $15.00. Pp. 972, with 101 plates. Baltimore: Williams & Wilkins, 1956.

Fifth Annual Report on Stress 1955–1956. Hans Selye, M.D., Ph.D., D.Sc. (Hon.), F.R.S. (Canada), F.I.C.S. (Hon.), Professor and Director, Institut de Médecine et de Chirurgie expérimentales, Université de Montréal, and Gunnar Heuser, M.D. (Cologne), Research Associate and Librarian of the Institut de Médecine et de Chirurgie expérimentales, Université de Montréal. Seventeen contributors. Pp. 815. New York: MD Pub'ns, 1956.

Electrocardiography—Fundamentals and Clinical Application, 2nd ed. Louis Wolff, M.D., Visiting Physician, Consultant in Cardiology and Chief of the Electrocardiographic Laboratory, Beth Israel Hospital; Assistant Clinical Professor of Medicine, Harvard Medical School. Price, $7.00. Pp. 342, with 199 illustrations. Philadelphia: Saunders, 1956.

Ciba Foundation Symposium on Porphyrin Biosynthesis and Metabolism. G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H.W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $6.75. Pp. 308, with 70 illustrations. Boston: Little, 1955.

JOHN WALTER MARTIN, M.D., F.A.C.S.

(1881–1956)

Dr. John Walter Martin was born in Durham County, England, April 3, 1881. He was brought to this country as an infant and his family settled in Iowa. His early life was one tinged with hardship and privation. His mother became a widow shortly after she settled here and she had to work hard to raise her family of three.

John Martin was determined to get an education and he worked in the coal mines near Oscaloosa while attending school as best he could. With encouragement and some help from his friends, he did undergraduate work at the University of Iowa and received his M.D. in 1903 from Northwestern University.

He began private practice in Colfax, a town in the coal-mining region of Iowa. Here he labored as a family doctor and returned some measure of kindness to the people who had been so kind and helpful to him. After five years of practice there he sustained a severe hand infection which deprived him of one finger and necessitated his giving up private practice for a period of two years.

During this time, 1907 to 1909, he took a surgical residency with Dr. Dean Lewis in Chicago. Because of poor health from pulmonary disease he began his practice of surgery in Denver. After several years he returned to Iowa and practiced in Des Moines, where he gave 20 years' service on the surgical staffs of the Iowa Lutheran, Iowa Methodist, and Mercy Hospitals.

Because of his interest in traumatic surgery and occupational disease, he was offered a position as Medical Director of the United States Fidelity and Guaranty Company of Baltimore. He remained in Baltimore about four years and became Vice President of the Company.

However, Dr. Martin never forgot his "native" Iowa and he returned there in 1934 and practiced for several years. Again he was to suffer privations: this time his hands became so badly affected by a dermatitis that he had to give up surgery.

John Martin, again, was equal to the challenge. At the age of 57 he went into dermatology and took his training at the Skin and Cancer Hospital in New York. In 1940 he began his practice of dermatology in Washington, and later in Silver Spring, Maryland.

He continued in practice until 1955, when he went into semi-retirement.

Dr. Martin was a member of the Medical Society of the District of Columbia, later a member of the Montgomery County Medical Society, an associate member of the American Academy of Dermatology and Syphilology, and a Fellow of the American College of Surgeons. He belonged to the Kiwanis Club of Washington and Silver Spring; he was a Scottish Rite Mason and a Shriner.

Dr. Martin died on May 22, 1956 in Doctors Hospital. He is survived by his wife, Helen Weir Martin, and one son, Dr. John W. Martin, Jr., a cardiologist practicing in Cleveland.

The contemplation of Dr. Martin's life leaves one with great admiration for a man who could meet adversity with calm determination and conquer it. Those of us who were in close contact with him professionally know that he always maintained a kindly and understanding attitude toward his patients. His memory will live long in the hearts of his patients and the friends who knew him well.

RAYMOND ALLEN OSBOURN, M.D.

MARVIN A. CUSTIS, M.D.

(1866–1956)

Dr. Marvin A. Custis, retired homeopathic physician, died June 3, 1956 at his summer home at East Gloucester, Massachusetts. Dr. Custis, who was Chairman of the Board of Directors of Perpetual Building Association, lived at 626 East Capitol Street.

Dr. Custis was a Washingtonian, born November 11, 1866. He graduated from Hahnemann Medical College and Hospital of Philadelphia in 1890. The same year he began practice in the District of Columbia. He retired in 1925.

Dr. Custis had been associated with the Perpetual Building Association since 1914, first as a director and later as Treasurer. He was President of Perpetual from 1935 to 1947, when he became Chairman of the Board. He was formerly Vice President of the Fidelity Investment Company and served as its President from 1930 to 1945. Dr. Custis became an Active member of the Medical Society of the District of Columbia in 1934. He was a member of the American Medical Association and the American Institute of Homeopathy.

He was a member of the Washington Real Estate Board, the Society of Residential Appraisers, the Washington Building Congress, the Potomac River Squadron, and the Potomac and American Rose Societies. He was also a member of the Washington Board of Trade, the Association of Oldest Inhabitants, and a life member of the Reciprocity Club. He was a Mason, affiliated with the Benjamin B. French Lodge and Eureka Naval Chapter, Knights Templar, Almas Temple, Eastern Star, Masonic Veterans Association of D. C., and the Redmen.

His wife, the former Frances H. Baden Custis, died in 1951. He is survived by a daughter, Miss Eleanor Parke Custis, who resided with her father.

SAMUEL FISHMAN, M.D.

(1908–1956)

Dr. Samuel Fishman, an Active member of the District Medical Society, died suddenly, May 30, 1956, in Silver Spring, Maryland. His home and offices were at 1414 Underwood Street, N.W.

Dr. Fishman was born in Depew, New York, December 6, 1908, the son of Louis and Hannah Fishman. He received his early education in Buffalo, New York, and he graduated from the University of Buffalo School of Medicine in 1933. He interned at Allied Sisters of Charity Hospital in Buffalo and several years later took postgraduate work in gastroenterology at Columbia University.

Dr. Fishman was on the staff of the Emergency Hospital in Buffalo from 1936 to 1942, first as clinical assistant in medicine and later as assistant attending in medicine. He was a veteran of World War II, having enlisted for service with the Army Medical Corps in 1942. He first instructed recruits in medical training. From 1943 to 1946 he was attending physician and surgeon to the U. S. Army General Dispensary in Washington. During the latter assignment, he was also Venereal Disease Control Officer for the Military District of Washington.

Following the War, he opened an office for general practice in the District of Columbia. The same year, 1946, he became a member of the Medical Society of the District of Columbia. He was also a member of the American Medical Association, the American Society for the Study of Arteriosclerosis, and the

Jacobi Society of Washington. He was affiliated with the Disabled American Veterans, Jewish War Veterans Post No. 58, and Adas Israel Congregation.

His wife, Mrs. Tillie Norwood Fishman, survives him, together with two young children, Linda and Robert. He is also survived by his father, now living in Miami Beach, Florida, and a sister, Mrs. Ira Powsner, of Buffalo, N. Y.

LAURENCE MAXWELL HYNSON, M.D.

(1879-1956)

Dr. Laurence M. Hynson, a Life member of the Medical Society of the District of Columbia, died, September 13, 1953. This belated information has just been received in the Society's offices.

Dr. Hynson was born at Still Pond in Kent County, Maryland, February 6, 1879, the son of Nathaniel T. and Lucy Weston Tiffey Hynson. He was educated in the public schools of Maryland and Washington.

Graduating from Columbian (now George Washington University) in 1904, he was licensed in the District of Columbia the same year. He was resident physician at Emergency Hospital in 1904–05.

For five years, Dr. Hynson was Assistant Secretary of the National Geographic Society.

Dr. Hynson was elected to Active membership in the Medical Association of the District of Columbia in 1905 and to the Medical Society in 1906, becoming a Life member of the latter in 1946. For many years he was a member of the George Washington University Medical Society and the Hippocrates-Galen Society.

Dr. Hynson maintained his last residence at 1464 Rhode Island Avenue, N.W. He had been in ill health for many years before his death and had not been in active practice since 1937.

Saturday Sanctuary—Scanlon

(*Continued from page 383*)

level of adjustment in the maturation process.

This resistance to change is prevalent in human nature, but it was acted out by our patient in regard to the initial Saturday interview. Hostility was mobilized when a new responsibility was thrust upon him, and when a change was expected in the pattern of his day-to-day living. At a deeper level murderous aggression manifested by the patient was provocative behavior aimed at inviting counteraggression as a means of satisfying his need to be punished. Each new aggression toward the parent, duplicated by the therapist, arouses further fear and guilt. The hostility is essentially toward the self as a reaction toward the inner passivity and dependent tendencies. We hear a great deal about traumatization of the child at the hands of a rejecting mother. I think we need to pay more attention now to the child who is rejecting of even the most ideal of parents and familial environments. The refusal of the organism to begin the successive adjustments imposed by the extra-uterine life may be early observed in the rejection of the nipple by the nursing newborn.

Clinical experience has long since taught us that the difference between normalcy and emotional ill-health is merely a matter of degree. I am sure that in every large city there must live thousands of personalities like our patient, who eke out existences in quiet desperation. Even the relatively healthy individual will show some remnants of the early mother-child relationship and be at times capable of regressive behavior or a retreat to some haven of refuge. Since this is true, gentlemen, and with your permission, I will now retreat to my own Saturday Sanctuary.

On the Lighter Side—Kadan

(*Continued from page 397*)

All of these bowlers received expensive, worthwhile merchandise prizes from the League. All members who attended the Banquet were rewarded with valuable door prizes donated by the druggists of the Washington Metropolitan Area.

All in all, it was a very successful 1955–56 bowling season. If any doctor or dentist who reads this account has been instilled with a desire to bowl next year in the D. C. Medical Bowling League, he should contact the League's Secretary, Mr. H. James Carter at OLiver 6-8043.

J. Earl Kadan, M.D.

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

1956–1957

OFFICERS

Ralph M. Caulk, *President*

James W. Watts, *President-elect*
Irving Burka, *First Vice President*
Shirley S. Martin, *Second Vice President*
Mr. Theodore Wiprud, *Secretary-Treasurer*

EXECUTIVE BOARD

Wallace M. Yater, *Chairman, term expires 1957*
Herbert P. Ramsey, *term expires 1958*
Preston A. McLendon, *term expires 1959*
W. Ross Morris, *term expires 1960*

Ex Officio

Ralph M. Caulk
Raymond T. Holden
James W. Watts
Mr. Theodore Wiprud, *Secretary*

BOARD OF CENSORS

Charles P. Ryland, *Chairman, term expires 1957*
James A. Dusbabek, *term expires 1958*
W. Leroy Dunn, *term expires 1959*

STANDING COMMITTEES

PROGRAM

William B. Walsh, *Chairman*
Benjamin Manchester, *Vice Chairman*
Robert E. duPrey
Leslie H. French
John P. Gallagher
Allan Edward L. Lee
Howard S. Madigan

PUBLIC HEALTH

Clifton R. Gruver, *Chairman*
Merwin L. Hummel, *Vice Chairman*
Ernest H. Aschenbach
Frank S. Bacon
Virginia P. Beelar
W. Montague Cobb
Arthur Dick
Milton M. Greenberg
Jack Kleh
J. Winthrop Peabody, Sr.
Monroe J. Romansky
Saul Zukerman

Alcoholism

Earl H. Mitchell, *Chairman*
Anthony Zappala, *Vice Chairman*
John D. Foley
Armand B. Gordon
Beveridge Miller
Robert P. Odenwald
Manson B. Pettit
Elbert T. Phelps
John D. Schultz, Jr.
Sylvan A. Steiner
Russel M. Tilley
Charles L. Smith, D.D.S.
Advisor

Child Welfare

Richard H. Todd, *Chairman*
Harold M. Hobart, *Vice Chairman*
William P. Argy
Hugh G. Clark
Allan B. Coleman
Dorothy D. Dowd
James M. Frawley
Robert B. Havell
Sander E. Lachman
John O. Nestor
Margaret M. Nicholson
Roland B. Scott

Diabetes

K. Hammond Mish, *Chairman*
Louis K. Alpert, *Vice Chairman*
Samuel Benjamin
W. Luther Hall
Samuel D. Loube
Aaron G. Saidman
Alma Jane Speer

Diseases of the Chest

Richard E. deButts, *Chairman*
Daniel L. Finucane, *Vice Chairman*
Frank S. Ashburn
James J. Feffer
Milton Gusack
Sol Katz
Roy G. Klepser
Marvin L. Kolkin
James P. Mann
John J. Nolan
Donald R. Sickler
George Tievsky

Maternal Welfare

S. Hazen Shea, *Chairman*
Jed W. Pearson, Jr., *Vice Chairman*
Howard A. Donald
Coleridge M. Gill
O. H. Jorgensen
James P. Kane
David H. Kushner
Robert B. Nelson, Jr.
W. Robert Perkins, Jr.
Rufus M. Roll
Joseph B. Sheffery
Charles E. Townsend

Venereal Disease

Edward E. Ferguson, *Chairman*
S. Ross Taggart, *Vice Chairman*
James Q. Gant, Jr.
Herbert A. Goldberg
Leroy E. Hoeck
R. Frank Jones
Emmett H. Markwood

PUBLIC POLICY

J. Keith Cromer, *Chairman*
Frank E. Wilson, *Vice Chairman*

Thomas H. Alphin
Albert N. Baggs
William H. Cooper
Frederick C. Fishback
William P. Herbst, Jr.
Robert S. Jason
Charles Wilson Jones
Joseph S. Lawrence
George E. Schreiner
Myer H. Stolar
Josephine Renshaw
Richard T. Sullivan

PUBLIC INFORMATION

George Maksim, *Chairman*
Edward J. Stieglitz, *Vice Chairman*

Robert Day
V. T. DeVault
Addison M. Duval
Joel B. Hoberman
Alan F. Kreglow
Joel N. Novick
Howard M. Payne
Robert Stolar
Joseph H. Watson
Charles Stanley White, Sr.

GRIEVANCE

Duane C. Richtmeyer, *Chairman, term expires 1957*
Karl C. Corley, *Vice Chairman, term expires 1959*
A. Magruder MacDonald, *term expires 1957*
Edward W. Nicklas, *term expires 1957*
Sydney Ross, *term expires 1957*
Fred A. J. Geier, *term expires 1958*
Hayden Kirby-Smith, *term expires 1958*
R. Massie Page, *term expires 1958*
R. Lee Spire, *term expires 1958*
Jerome F. Crowley, *term expires 1959*
Albert E. Marland, Sr., *term expires 1959*
James J. McFarland, Jr., *term expires 1959*

INDUSTRIAL HEALTH

R. Lomax Wells, *Chairman*
Leonard T. Peterson, *Vice Chairman*

Theodore J. Abernethy
Charles E. Bickham, Jr.
Edward A. Cafritz
Urban J. Dowling
I. Phillips Frohman
Lewis A. Klein
Maurice J. Kossow
V. John Murgolo
Lawrence A. Pyle, Jr.
Francis D. Threadgill
Joseph Rogers Young

MEDICAL CARE

C. Willard Camalier, Jr., *Chairman*
Luther W. Gray, *Vice Chairman*

William O. Bailey, Jr.
William K. Billingsley, Jr.
Robert V. Choisser
Robert H. DeWitt
Alban W. Eger
James J. Feffer
Maurice H. Friedman
Henry H. Lichtenberg
James P. Lyons
Edward C. Mazique
Lawrence J. Thomas

MEDICAL ETHICS AND PROFESSIONAL CONDUCT

Albert E. Marland, Sr., *Chairman, term expires 1959*
Ernest A. Gould, *Vice Chairman, term expires 1959*
Philip Burka, *term expires 1957*
Paul F. Jaquet, Jr., *term expires 1957*
Daniel Sondheimer, *term expires 1958*
Charles Stanley White, Jr., *term expires 1958*
Ralph D. Whitley, *term expires 1959*

MENTAL HEALTH

Zigmond M. Lebensohn, *Chairman*
Robert T. Morse, *Vice Chairman*

Maxwell Boverman
John R. Cavanagh
Paul Chodoff
Roger S. Cohen
Robert H. Groh
John A. Kneipp
Isadore Rodis
Marshall deG. Ruffin

PROFESSIONAL LIABILITY INSURANCE

Robert E. Moran, *Chairman, term expires 1959*
Frank S. Bacon, *term expires 1957*
John M. Orem, *term expires 1957*
Forrest V. Schumacher, *term expires 1957*
James C. Walsh, *term expires 1957*
John J. Andrina, *term expires 1958*
John B. Marbury, *term expires 1958*
Edward W. Nicklas, *term expires 1958*
William J. Tobin, *term expires 1958*
Brooks G. Brown, *term expires 1959*
Frank E. Gantz, *term expires 1959*
Hugo V. Rizzoli, *term expires 1959*

HOUSE

W. Ross Morris, *Chairman*
Julius Fogel, *Vice Chairman*

Vincent Hernandez
Arthur H. Lewis
George William Ware

SPECIAL COMMITTEES

BLOOD

Frank W. Konzelmann, *Chairman*
Kenneth L. McCoy, *Vice Chairman*

Edward Adelson
Raymond O. Dart
Pearl B. Holly
Paul R. McCurdy
Thomas F. McDermott
Charles E. Rath, Jr.
Jack J. Rheingold
Daniel L. Weiss

COÖPERATION WITH D. C. BAR ASSOCIATION

Samuel Diener, *Chairman*
William T. Gibb, Jr., *Vice Chairman*

Leo B. Gaffney
Melvin O. Goodman
Everett J. Gordon
James Hawfield
J. Earl Kadan
Arthur A. Morris, Jr.
Edward M. Ohaneson
Wesley M. Oler
Raymond A. Osbourn

CANCER CONTROL

Herbert M. Giffin, *Chairman*
E. Osmun Barr, *Vice Chairman*

Peter D. Comanduras
Murray M. Copeland
Frederick Y. Donn, Jr.
Benedict J. Duffy
Milton L. Goldman
Frederick B. Hartsock
Harry A. Horstman
Lloyd G. Lewis
Maurice Mensh
Gilbert Ottenberg
Lois I. Platt
Cyril A. Schulman
Max G. Sherer
Alfred J. Suraci

CLASSIFICATION

Lawrence A. Rapee, *Chairman*
Earl B. Barnes, *Vice Chairman*

Joseph F. Belair
Parker S. Dorman
James J. Feffer
Charles E. Fierst
Marvin M. Gibson
Grace H. Guin
William Allen Howard
J. Bay Jacobs
David S. Johnsen
Naomi M. Kanof
Isadore Levin
John Louzan
Maurice Mensh
Willis B. Morse
L. Connor Moss
John Schwarzmann
George J. Stuart
Norman Taub

EMERGENCY MEDICAL SERVICE OF WASHINGTON METROPOLITAN AREA

Alfred E. Brigulio, *Chairman*
Arch S. Russell, Jr., *Vice Chairman*

William H. Beard
Ray N. Brown
James E. Chapman
Milton C. Cobey
James A. Gannon, Jr.
Alfred R. Greenfield
John W. Latimer, Jr.
John T. Lord
Edwin C. Mitchell
Leo J. Schildhaus
S. Ross Taggart
Sherman A. Thomas
J. Ogle Warfield, Jr.
Richard L. Whelton
Edward C. Wilson, Jr.

HOSPITALS

Hugh H. Hussey, *Chairman*

William F. Burdick
Robert J. Coffey
Raymond T. Holden
W. Dabney Jarman
William S. McCune

MEDICAL ADVISORY TO THE D. C. DEPARTMENT OF HEALTH

William P. Herbst, Jr., *Chairman*

Walter Bloedorn
Crenshaw D. Briggs
Warwick T. Brown
Paul B. Cornely
Francis M. Forster
Hugh H. Hussey
George Maksim
Preston A. McLendon
Winfred Overholser
Herbert P. Ramsey
R. Lomax Wells
Wallace M. Yater

MEDICAL BUREAU

Harry Zehner, *Chairman*
Allen S. Cross, *Vice Chairman*

Irving Burka
William Chin
John E. Everett
Benjamin Golden
Jaye Grollman
Caroline Jackson
Bernard Kapiloff
Bernard Katzen
William Lewis
David N. Nolan
Norman Paul
Charles P. Ryland
Edgar Snowden

MEDICAL EDUCATION FUND

James E. Fitzgerald, *Chairman*
Thomas F. Kelliher, *Vice Chairman*

Parker S. Dorman
John W. Lawlah
Thomas M. Leonard
Charles A. Millwater
Mary K. L. Sartwell
Luther H. Snyder

REORGANIZATION OF THE MEDICAL SOCIETY

William P. Herbst, Jr., *Chairman*

Brian Blades
Robert J. Coffey
O. Hugh Fulcher
Herbert S. Gates
Raymond T. Holden
A. Magruder MacDonald

RUFFIN REQUEST FUND

Preston A. McLendon, *Chairman, term expires 1957*
Frank D. Costenbader, *term expires 1957*
Edgar Snowden, *term expires 1957*
Stuart O. Foster, *term expires 1958*
Joseph J. Mundell, *term expires 1958*

TRAFFIC

Herbert S. Gates, *Chairman*
Oscar B. Hunter, Jr., *Vice Chairman*

Milton C. Cobey
Benjamin F. Dean, Jr.
Max J. Fischer
Herman S. Hoffman
G. Victor Simpson
Bushnell Smith

VETERANS AFFAIRS

William T. Spence, *Chairman*
Paul R. Wilner, *Vice Chairman*

Montgomery Blair, Jr.
Charles E. Hannan
Raymond T. Holden
August Kramm
Lawrence D. Summerfield
George D. Weickhardt

OBSTETRICAL BOARD

C. K. Fraser, *Chairman*
J. Bay Jacobs, *Secretary*

Raymond T. Holden
Andrew A. Marchetti
Ella Oppenheimer
John L. Parks
Alvin F. Robinson (*Medico-Chirurgical Society of D. C.*)
Coleridge Gill (*Howard University School of Medicine*)

DISTRICT OF COLUMBIA DAY

(Southern Medical Association)

Marcel J. Foret, *Chairman*

COUNCIL ON REHABILITATION

Preston A. McLendon, *Chairman*
Charles D. Shields, *Vice Chairman*

John P. Adams
Hill Carter
Thomas F. Collins
Hugh H. Hussey
Zigmond M. Lebensohn
Robert E. Moran
Howard M. Payne
W. Robert Perkins, Jr.
G. Victor Simpson
Harold Stevens
Allan E. Walker, Jr.
Charles S. Wise

Metropolitan Area Representatives

Alexandria City
Richard Palmer
John A. Sims
John C. Watson

Arlington County
John E. Alexander
Alfred E. Jackson
Howard O. Mott
Stephen J. Sheehy
Joseph W. Stein

Fairfax County
Edward C. Day
William L. Harris
Robert J. O'Donnell

Montgomery County
Robert A. Bier
Howard T. Morse
Austin B. Rohrbaugh

Prince Georges County
Wolcott Etienne
William B. Hagan
S. Jack Sugar

DELEGATES

American Medical Association

Raymond T. Holden
Herbert S. Gates, *Alternate*
Victor R. Alfaro

Health Section, United Community Services

Josephine Renshaw
Milton M. Greenberg

LEGAL COUNSEL

Warren E. Magee

OFFICERS OF SECTIONS

OTOLARYNGOLOGY

Russel S. Page, Jr., *Chairman*
James J. McFarland, Jr., *Vice Chairman*
Edward M. O'Brien, *Secretary*
Morris E. Krucoff, *Treasurer*

NEUROLOGY AND PSYCHIATRY

Stacey L. Rollins, *Chairman*
Robert H. Groh, *Vice Chairman*
Desmond S. O'Doherty, *Secretary-Treasurer*

PATHOLOGY AND LABORATORY MEDICINE

Daniel L. Weiss, *Chairman*
Kenneth L. McCoy, *Vice Chairman*
Grace H. Guin, *Secretary-Treasurer*

GASTROENTEROLOGY

Ernest A. Gould, *Chairman*
Lewis A. Klein, *Vice Chairman*
William H. Ferguson, *Secretary-Treasurer*

PEDIATRICS

George Maksim, *Chairman*
William A. Howard, *Vice Chairman*
John E. Cassidy, *Secretary-Treasurer*

ANESTHESIOLOGY

William H. Devlin, *Chairman*
William E. Bageant, *Vice Chairman*
Arch S. Russell, Jr., *Secretary-Treasurer*

RADIOLOGY

David H. Rosenfeld, *Chairman*
Forrest V. Schumacher, *Vice Chairman*
Melvin O. Goodman, *Secretary-Treasurer*

GENERAL PRACTICE

W. Robert Perkins, Jr., *Chairman*
Beveridge Miller, *Vice Chairman*
Willis B. Morse, *Secretary-Treasurer*

DERMATOLOGY AND SYPHILOLOGY

Naomi M. Kanof, *Chairman*
Peter N. Horvath, *Secretary-Treasurer*

OPHTHALMOLOGY

Robert E. duPrey, *Chairman*
M. Noel Stow, *Vice Chairman*
Marshall M. Parks, *Secretary-Treasurer*

INTERNAL MEDICINE AND ALLIED SUBSPECIALTIES

Henry D. Ecker, *Chairman*
Benjamin Manchester, *Vice Chairman*
William K. Billingsley, Jr., *Secretary-Treasurer*

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *August*, 1956 NUMBER 8

RECENT ADVANCES IN INFERTILITY*

FRED A. SIMMONS, M.D., F.A.C.S.

Instructor in Gynecology, Harvard Medical School; Associate Visiting Surgeon, Massachusetts General Hospital, Boston

SUCH A PROVOCATIVE title as "Recent Advances in Infertility" puts a burden on the speaker to be up-to-date or even premature in his handling of the material to be presented, depending upon one's interpretation of the word "recent." Anything recent in infertility depends upon how well one keeps up with the literature and how well he attends the rapidly increasing number of meetings devoted to the problems of the infertile couple.

In one sense, then, the American Society for the Study of Sterility is a recent group, in its eleventh year, as compared to the Obstetrical Society of Boston, the oldest medical society in this country. This gives me the opportunity of reviewing, briefly, to emphasize their importance, the minimal diagnostic studies necessary to offer the barren marriage.

Diagnostic Investigation

When a couple consults the physician with a chief complaint of infertility, the most important function of the doctor is to be complete in his investigation. This requires a complete history and physical examination of both partners, urinalysis, complete blood count, basal metabolism test, serologic studies, and a search into the premarital and marital sex habits, surgical operations, and psychologic, emotional, and nutritional factors.

The wife requires specialized minimal diagnostic procedures, to wit, insufflation of the tubes, endometrial biopsy, postcoital examination of the cervical mucus, and repeated pelvic examination.

The husband must have at least 2 properly collected and properly examined semen specimens. At the risk of repetition, may I point out that these specimens must not be collected in a sheath which destroys motility, but in a clean, dry, wide-mouthed glass bottle through manual means or by coitus interruptus. Examination must be within 2 hours of the time they are produced.

Recent values for so-called normal semen may prove the most important item of this discussion, since most texts and many clinical reports in this rapidly progressing field are out of date when published. October 7, 1955, at the Canadian Fertility Society meeting, in Toronto, a comparison was made between the old concept of normal semen values and the new. Time does not permit reference to the old except as depicted in table 1. Suffice it to say that most authorities in 1955 accept as normal a volume of 2.5 to 6.0 c.c. of seminal fluid, with an actual count of 20,000,000 sperm per c.c. or more, as long as the initial and sustained motility in a hanging drop exceeds 40 per cent of actively progressive motile sperm, including 50 per cent or more normal forms by stained smear study. MacLeod[1, 2] has established these levels from exhaustive work on over 1,000 fertile men and over 1,000 infertile men. Clinically, it is still more favorable prognostically to find 60,000,000 sperm per c.c., but the recent emphasis throughout the world is on motility and more particularly the degree of motility.

---

* Delivered at the 25th Annual Scientific Assembly of The Medical Society of the District of Columbia, October 12, 1955.

TABLE 1*

Semen Analysis—Normal Values

	Before 1952	After 1952
Volume	2.5–6.0 c.c.	3.33 c.c.
Number	60,000,000	20,000,000
Motility	60% motile	40% motile
Morphology	75% normal	50% normal

* Adapted from MacLeod, J.[1]

I am happy to bring you brand new work from the British Isles where there is a better opportunity for investigation of the male than here. Hanley[3] of London has just reported 5 pregnancies in the wives of 7 men on whom he did bilateral epididymovasostomy. He has surgically repaired large varicoceles, not by the old-fashioned resection of the pampiniform plexus, but by a new attack via ligation of the internal spermatic vein at the level of the internal inguinal ring. According to Donald Young,[4] of Liverpool, who spoke recently in Toronto, Tulloch[5] of Edinburgh reports 30 patients with varicocele, 10 of whom achieved paternity postoperatively, 10 who had greatly improved semen specimens, and 10 who failed to respond. Among the 10 men who achieved paternity were 2 who started with azoöspermia. Davidson[6] of London (1954) reported only 1 man who failed to improve in the first 12 cases of varicocele operation, and this man did improve after secondary operation for a substantial residual varicocele. Five of the 12 men achieved paternity. Both authors emphasize, as does Mr. Young,[4] that there may be a delayed reaction up to a year after surgery before maximum spermatogenesis or fertility appears. I am pleased to report 3 of 7 men whose wives became pregnant and delivered normal offspring after ligation of the internal spermatic vein for a large varicocele. Here, indeed, is rewarding recent evidence that the infertile male may be helped.

TABLE 2*

Twenty-five Testicular Biopsies in Azoöspermia

	No. of Cases	Testis Size	Live Babies
Congenital block	6	Normal	0
Bilateral epididymitis	3	Normal	6
Surgical block	1	Normal	0
Sclerosing tubular degeneration	4	Small	0
Complete aspermia	4	Small	0
Severe hypospermatogenesis	5	Small	0
Immature	2	Small	2
	—		—
TOTAL of all wives studied and normal	25		8

* From Simmons, F. A.: Ann. New York Acad. Sc., 1952, **55**, 653.

Testicular biopsy is another recent surgical attack on the infertile male and helps particularly in classifying the pathologic condition or normality of the testis and in determining prognosis. As table 2 shows, men with azoöspermia doomed to childlessness without surgical intervention now have children, and occasionally men with no sperm can be made fertile by discriminate hormonal therapy (table 3).

TREATMENT OF THE MALE

I hasten to denounce the so-called "testosterone rebound phenomenon" recently so grossly misrepresented in a lay monthly[7] (September, 1955) as a new cure for sterile men. It does not work. At the Massachusetts General Hospital we gave it up 2 years ago. Fifty specialists of 104 circularized by our Society reported failure with testosterone, and permanent damage has been done to a precarious germinal epithelium by its promiscuous use. In 840 male patients rated as infertile, the conception rate was in fact 4 per cent. This is a far cry from the "whopping 85 to 90 per cent of 2,000 would-be fathers treated so far who are today normally fertile men," as the lay author reports. He reports one physician as "making fatherhood possible for about 9 out of 10 husbands." In a recent issue of *Fertility and Sterility*[8] the reported conception rate with testosterone therapy was less than 4 per cent. There are almost twice as many men who did not experience any improvement in their sperm counts as men in whom some improvement was noticed. There was no improvement in the sperm counts of fully 40 per cent in this group.

In truth, then, in male infertility the scalpel is mightier than the hypodermic needle.

TABLE 3*

Twenty-five Consecutive Cases of Oligospermia

	No. of Cases	Live Babies
Normal testis†	5	0
Spermatogenic arrest‡	10	1
Hypospermatogenesis	8	1
Aspermatogenesis	1	0
Miscellaneous§ (focal atrophy plus normal areas)	1	0
TOTAL	25	2

* From Simmons, F. A.: Ann. New York Acad. Sc., 1952, 55, 652.

Note: All wives studied—

† One has endometriosis

‡ Two successful semi-adoption babies; 1 polycystic ovaries

§ Endometriosis

A recent advance in the relief of human infertility was a resolution adopted in June of this year endorsing artificial insemination or therapeutic insemination, as it is beginning to be called. At a meeting held in Atlantic City on June 4, 1955 of the American Society for the Study of Sterility, which has a membership of 500 specialists, the following statement was approved:

"If it is in harmony with the beliefs of the couple and doctor, donor artificial insemination is a completely ethical, moral and desirable form of medical therapy.

"Conditions under which donor artificial insemination is acceptable include:

1. Urgent desire of the couple to have such therapy applied to the solution of their infertility problem.
2. Careful selection by the physician of a biologically and genetically satisfactory donor.
3. The opinion of the physician, after thorough study, that the couple will make desirable parents.

"Those physicians who have carried out donor insemination for several decades can attest that in many cases it is a more desirable procedure for acquiring a family than adoption.

"One great advantage of donor insemination is that it provides the opportunity for the husband to share the months of his wife's pregnancy and her childbirth. From observation over many years the membership is impressed by the almost universal good results achieved in respect to the children and the entire family unit by this experience. The fact that, in some instances, patients have returned for as many as 4 children by donor insemination is further proof of the happiness it bestows."

TREATMENT OF THE FEMALE

In carefully selected cases a bold but conservative surgical attack on the infertile female will be rewarded with a high percentage of success. In patients with endometriosis, if all the other findings come out normally, as high as a 42 per cent pregnancy rate can be expected. This is further augmented by the administration of small doses of methyltestosterone, 5 mg. sublingually for 100 days following the established diagnosis of endometriosis. In patients who have bilateral polycystic ovaries with or without associated hirsutism, obesity or amenorrhea, throughout the country 60 per cent of such wives are benefited to the point of producing children and 80 per cent have restoration of normal menses. This is the highest salvage we have by any attack on anovulatory patients. At the Octobe1 meeting in Toronto, Pendleton Tompkins[9] of San Francisco reported the indications for suspension of the uterus, which is frowned upon in many clinics as an unnecessary operation. The requisites for these infertile women are (1) impossibility of replacing the uterus, (2) otherwise normal examinations, and (3) 2 years of involuntary sterility. Nine of 12 carefully selected patients operated on by him conceived and delivered living children, and 75 per cent salvage is certainly worth considering. He also agreed that the so-called "seminal pool" in the posterior vagina was a myth, thus confirming the able X-ray demonstrations of Dr. L. J. Harris[10] of Toronto at the Canadian meeting.

The surgery of nonpatent tubes continues to be unsatisfactory. However, in proper hands and in teaching centers, where many patients may be sent to be operated on by gynecologists with vast experience, 1 out of 4 may expect to achieve parenthood. The medical profession should stop scoffing at this type of surgery and allow the couple to decide whether or not they wish to take a 25 per cent chance that their childlessness may be relieved by such elective surgery. There are many other recent advances in the field of infertility, such as the Fern test, Speinbarkeit, vaginal smears for determining the time of ovulation, culdoscopy, and unusual reconstructive surgery. These maneuvers, however, are limited in their value, and their worth should still be viewed with skepticism until sufficient cases have been accumulated to make the results statistically valid. The increasing emphasis on the psychologic attitude of the infertile female merits careful watching. Patients needing this type of investigation and treatment are necessarily selected from those who have first been offered the minimal diagnostic studies outlined above.

SUMMARY

In summary, I should like to emphasize once more that the emphasis on investigating the sterile couple should include the following:

1. It is a "couple" problem and deserves careful consideration of both the male and female of the barren marriage.

2. Attention to detail with complete history, complete physical examination, and a complete carrying out of the minimum diagnostic studies are essential.

3. If one mate is infertile, one's attention should be directed to improving the fertility of the other mate of these couples. For males more carefully chosen surgery for large varicoceles and blocks of the accessory sexual apparatus and, rarely, reconstructive surgery; and in females the bold but conservative surgical attack on bilateral polycystic ovaries, endometriosis, adherent fixed retroversions and peritubal lesions will increase the salvage of living children for those couples previously doomed to a childless marriage.

BIBLIOGRAPHY

1. MacLeod, J.: Male factor in fertility and infertility; analysis of ejaculate volume in 800 fertile men and in 600 men in infertile marriage. Fertil. & Steril., 1950, **1,** 347.
2. MacLeod, J., and Gold, R. Z.: Male factor in fertility and infertility; spermatozoön counts in 1,000 men of known fertility and in 1,000 cases of infertile marriage. J. Urol., 1951, **65,** 436.
3. Hanley, H. G.: Surgery of male subfertility; Hunterian Lecture delivered at the Royal College of Surgeons of England on April 28, 1955. Ann. R. Coll. Surgeons England, 1955, **17,** 159.
4. Young, D. (Liverpool, England): Personal communication.
5. Tulloch, W. S.: Varicocele in subfertility; results of treatment. Brit. M. J., 1955, no. 4935, 356.
6. Davidson, H. A.: Treatment of male subfertility; testicular temperature and varicoceles. Practitioner, 1954, **173,** 703.
7. James, S.: Chemistry is curing sterile men. Coronet, 1955, **38,** 38.
8. Getzoff, P. L.: Clinical evaluation of testicular biopsy and rebound phenomenon. Fertil. & Steril., 1955, **6,** 465.
9. Tompkins, P.: Paper delivered before Canadian Sterility Society in Toronto, September 7, 1955.
10. Harris, L. J.: Paper delivered before Canadian Sterility Society in Toronto, September 7, 1955.

(Continued on page 472)

THYROID DISEASE IN PEDIATRICS*

JOHN C. McCLINTOCK, M.D., F.A.C.S.

Assistant Clinical Professor of Surgery, Albany Medical College; Assistant Attending Surgeon, Albany Hospital

WILLIAM H. SEWELL, M.D.

Resident in Surgery, Albany Hospital, Albany, New York

DISEASES of the thyroid gland in children under fifteen years of age usually follow the same pattern as variations in function for this organ in adult life. Differences do occur, however, since a lack of adequate thyroid hormone in the infant or child results in permanent alteration in growth, development, or maturation. A second peculiarity is the rarity of toxic nodular goiter. This review discusses thyroid dysfunction in children under 15 years of age when there is an inadequate hormone supply, when there is an excess of thyroid hormone, or when nodular goiter is present. Unusual etiologic factors for some of these conditions are presented.

HYPOTHYROIDISM

Hypothyroidism in children is usually separated into 2 groups, based upon the age of onset of the disease. Congenital cretinism is so named because the disease is present at birth or becomes manifest soon thereafter. The second group is usually referred to as juvenile hypothyroidism because its onset is after the age of 2, frequently later in childhood, but before puberty. The important difference between these 2 lies in the growth and development of the brain, since greater damage can occur in the younger group. For example, Weihl[1] has stated that in treated cretins one can expect an I.Q. of 80 or above in only 25 per cent, whereas 90 per cent of the juvenile athyrotics, when properly treated, will have an I.Q. of 80 or better. Early recognition of the condition is therefore vital.

The clinical symptom which should arouse suspicion is the slowness or lack of expected development. Dwarfism may be suggested at birth but becomes more noticeable when proper growth fails to take place. The relationship of trunk length to leg length shows shortness of the latter, which becomes more apparent when the child begins to walk. Fontanel closure is delayed. Dentition is delayed and the shedding of deciduous teeth postponed. Somnolence and apathy with consequent lack of normal activity are suggestive. Such babies fail to nurse properly because of weakness and sleepiness. Constipation and anorexia may be noted by the mother. There is excessively dry skin. When the classic picture of a pot belly with umbilical hernia and macroglossia are added to the above symptoms the disease is well advanced.

ILLUSTRATIVE CASE

Case 1 (No. B-63367). A 4-months-old baby girl was admitted to the Albany Hospital on November 24, 1953 because of a large tongue. Pregnancy and delivery at term were uncomplicated. At 1 month the mother noted difficulty in breathing, which she thought was due to a large tongue. Hypothyroidism was first diagnosed at 3 months of age.

Examination revealed a temperature of 97° F. The child appeared underdeveloped and weighed only 10 pounds 12 ounces. She was irritable and sluggish. She had puffy eyes, an open mouth, and a large tongue. The cry was weak and hoarse. The skin was dry, the hair coarse. The posterior fontanel admitted 1 finger, and the anterior fontanel was 2 cm. across. The abdomen was protuberant with a small umbilical hernia. The extremities were pale and cool. The sucking reflex was poor.

---

* Presented at the Fifth Midwinter Seminar of the Medical Society of the District of Columbia in Washington, D. C., February 15, 1956.

The hemoglobin was 6 Gm., and the red blood cells numbered 2,600,000 with a hematocrit of 21. The blood cholesterol was 124 mg. per cent. Thyroid uptake of I^{131} was 15 per cent in 24 hours. An electroencephalogram showed low-voltage activity throughout. Skeletal roentgenograms revealed a delay in the appearance of ossification centers as manifest by absence of the distal femoral and proximal tibial epiphyses with absence of carpal centers.

Transfusions, gavage feedings, vitamins, and exogenous thyroid hormone were given. Thyroid extract was begun at 15 mg. daily and increased to 90 mg. daily. The symptoms rapidly regressed. The child has been maintained on 90 mg. of thyroid extract daily, and to date she has developed normally. It is too early to assess mental capacity, but some degree of retardation may result from the delay in onset of therapy.

In either the older or the younger hypothyroid child, a yellow tint of the skin with clear sclera results from failure of the liver to convert carotene to vitamin A. In the older group easy fatigability is common, as are dryness and sparseness of the hair, together with dry skin, apathy, and lack of normal activity. Unusual cold sensitivity with cold extremities may be observed. The voice can become unusually deep. Sexual development may be retarded, although it usually progresses to maturity.

The condition most likely to be confused diagnostically with cretinism is mongolism. Patients who suffer from mongolism show normal skeletal growth and do not present determinable evidences of hypothyroidism except rarely when the diseases coëxist. Mongolian idiots have a short anterior-posterior skull measurement with flattening of the occiput. The eyes slant upward, the epicanthic folds are prominent, and the base of the nose is widened. Other congenital anomalies are frequently present, particularly distorted fifth digits and cardiac defects. Kearns and Hutson[2] found that radioactive iodine uptake in the thyroid with urinary assay of this isotope closely resembled the normal, whereas those who suffered from congenital thyroid aplasia gave values quite comparable to adult myxedema. These clinical features together with laboratory evidence against hypothyroidism help to differentiate the conditions.

When suspicion of hypothyroidism has been aroused, laboratory examinations should be undertaken to confirm the diagnosis. Prominent among these is the condition of the epiphyses. The name epiphyseal dysgenesis has been given to the presence of multiple centers of ossification associated with poorly defined, fluffy outer margins. This is particularly evident in the head of the femur but may also be seen in the ends of other long bones. Schlesinger and Fisher[3] suggest that the number of ossification centers in the hand and wrist appear to be a reliable index of skeletal development, and absence or delayed appearance of such centers, when compared to the normal, helps to confirm the diagnosis.

A chemical study of diagnostic value is the determination of the serum protein-bound iodine. The normal adult range for this test is 4 to 8 micrograms per 100 ml., but during the first few weeks of life higher values are normal. An average normal of 8.8 mg. per 100 ml. was reported by Noble and Rowlands[4] for this early period. Danowski et al[5] found a range of 10 to 12 mg. in the first week of life, with a gradual drop over 12 weeks before the range was that indicated above for the adult. In an infant, then, results in the low normal adult range or below strongly suggest hypothyroidism.

Talbot et al[6] found the serum alkaline phosphatase to range from 5 to 14 Bodansky units per 100 ml. of serum in the normal, but in untreated cretins or juvenile hypothyroid patients the results were under 4.5 units. Talbot and Sobel[7] think this test is the most reliable of all laboratory procedures as a diagnostic aid for these conditions.

Determination of the serum cholesterol may be helpful. It is of particular value when determined serially to assure that the replacement therapy is adequate. It is suggested that the normal range in the laboratories doing the test be ascertained and the high daily variable in any given patient be kept in mind.

When available, tracer studies with I^{131} can be of assistance. The amount of I^{131} in the 48-hour urine excretion seems to be more reliable in the hypothyroid states. Range of excretion of I^{131} in the 48-hour urine has been indicated as from 73 to 92 per cent by Talbot.[8] Conversely, Lerman[9] indicated 48-hour uptake by the thyroid gave values of 0 to 15 per cent in primary myxedema.

Determination of urinary creatinine and other laboratory studies may sometimes be of assistance, but as a rule such tests are less valuable and do not justify their expense. Determination of the basal metabolic rate (BMR) requires careful training of the child to perform the test properly, and it is of significance only if serial determinations are made.

The laboratory can be of great assistance in separating primary thyroid hypofunction from primary pituitary insufficiency, which comprise the 2 major types of hypothyroidism. For example, Pickering and Miller[10] found that the uptake of I^{131} in normal subjects 48 hours after injection of thyrotropin was 3 to 12 per cent. In primary hypothyroid cases, 2 patients showed no uptake and 2 reached 8 per cent. In pituitary insufficiency the uptake was 35 to 38 per cent.

A possible cause for hypothyroidism in the newborn should be mentioned. Elphinstone[11] reviewed the literature to find 10 cases reported in which the baby was abnormal at birth from a mother receiving an antithyroid drug. He added a case of his own in which the child was hypothyroid at birth, responded well to treatment, but was later found to be mentally retarded. Norris[12] reported an additional baby whose response to replacement therapy was good. It should be emphasized that antithyroid compounds can cross the placenta and are excreted in the milk. It is essential, therefore, when treating hyperthyroidism with antithyroid compounds in a pregnant mother, to keep the metabolism in the high normal area and not permit the drug to produce a depression to lower levels. (One should also bear in mind that during the latter part of pregnancy the BMR is normally elevated to as much as plus 25, unless the body surface calculation takes into account the fetal surface.)

In endemic goiter areas a lack of iodide in the mother's diet during the pregnancy may result in the production of a goiter in the fetus with hypothyroidism. In such areas the addition of a small daily increment of iodide prevents this form of thyroid dysfunction.

It is of great importance to start replacement therapy with thyroid hormone before permanent damage results, especially to the brain. Unfortunately, this is all too frequently not done in the congenital cretin. Other symptoms may be corrected almost completely except when epiphyseal bone growth has ceased.

The hormonal replacement should be begun cautiously and increased slowly until normal metabolic levels are attained. The average requirement is 60 to 90 mg. of desiccated thyroid per square meter of body surface. (A 6-foot, 175-pound person has 2 square meters of body surface, while a 3-pound, 30-inch child has ½ square meter of body surface.) It is important that this calculated dose be started with not over ¼ (6 to 15 mg.) of the estimated total and that it be increased at not less than 3-week intervals. Schlesinger and Fisher[3] suggest that measurement of height and X-ray examination of ossification centers every 3 to 6 months will help prevent overdosage and that serial determination of the serum cholesterol and electrocardiogram will help show whether or not the dose is adequate, once it has been established.

ILLUSTRATIVE CASE

Case 2 (No. B-62109). A 10-year-old girl was admitted to the Albany Hospital on October 26, 1953 with the chief complaint of anemia. Unusual weight gain had begun in 1950. The anemia had been discovered 4 months before this admission, and during this time 1 pill (amount unknown) of thyroid extract had been given daily. The patient was less active than the other siblings. Menstrual spotting was observed in June, but the first period of 2 days' duration occurred on October 23, 1953. No further menstrual flow was observed since therapy was started.

Examination revealed a short, obese girl, with a weight of 75 pounds and a height of 49 inches. These values fall into the sixtieth and third percentile levels respectively on the anthropometric scale of the Boston Children's Medical Center. The voice was deep. The abdomen was protuberant and without an umbilical hernia. The liver was palpable 2 fingerbreadths below the costal border. Pubic or axillary hair was not present. The hands appeared puffy and the skin dry.

Skeletal X-ray films showed the patient's bone age to be 1½ to 2 years behind the chronologic age. Serum carotenoid level was 3 times normal, and the serum cholesterol was reported as 330 mg. per 100 ml. Eosinophil response to ACTH was low normal, but the water load test indicated normal adrenal function. The BMR was minus 15 per cent. The hemoglobin was 11.5 Gm., and the red blood cells numbered 3,900,000, with a hematocrit of 43. All other laboratory tests were normal.

Thyroid extract was restarted at 8 mg. per day and increased up to 30 mg. Abatement of symptoms and a normal development have ensued.

Nodular Goiter

In the experience at the Albany Hospital, no patient in the age group under study, and in the literature only 1 reported case[13] has been found in which hyperthyroidism was associated with a nodular goiter. The problem of nodular goiter in pediatrics is chiefly concerned with the question of cancer.

Malignant thyroid neoplasms in patients under 15 years of age are being reported with increasing frequency. Winship[14] could find no documented case reported prior to 1899, and during the first decade of this century he encountered no reported cases. Three cases came to light in the second decade, and 5 reported cases were found in the third decade. After that there was a rapid increase in the number of cases reported, with more than 50 in the fifth decade and 36 in the years 1951 through 1954. Ward[15] quotes Searls who found that 2.9 per cent of thyroid nodules excised in all age groups in 1934–1939 were malignant, but in 1949–1954 13.3 per cent were cancer. Hayles, Kennedy, Beahrs and Woolner[16] have recently reported 41 patients under 15 years of age seen in the Mayo Clinic from 1909 through 1954. Twenty of these were seen during the 5-year period, 1949–1954. An increase in the general population may explain some of the increased incidence of malignant thyroid disease in children, but it does not seem probable that it accounts for all of the increase. Of interest is the suspicion that cancer is found more often in those patients who have had previous external irradiation to the thymus or cervical lymph nodes.

What relation does malignant thyroid disease bear to benign nodular thyroid enlargement in children under 15 years of age? Ward[15] reports that 49 per cent of nodular goiters removed from children under 15 were malignant. Dailey and Lindsay[17] found that 59 per cent of nodules removed from patients under 20 years of age were malignant. As in the case of adult thyroid cancer, there is argument concerning the accuracy of these percentages. It is obviously true that benign thyroid adenomas occur in children; it is a fact that some instances of inflammatory change in the thyroid are clinically misdiagnosed as nodular goiter; and in some series cancers diagnosed clinically may be included in the percentages. Nevertheless, it is apparent that a nodular lesion in the thyroid gland of a child requires excision for pathologic diagnosis.

It is of considerable importance that in more than 50 per cent of most cases reported in the literature the children had enlarged cervical lymph nodes when first examined. A palpable tumor in the thyroid need not be present, although careful examination will usually demonstrate its presence. Enlarged, firm, movable, non-tender, cervical nodes unassociated with upper respiratory infection or systemic disease should always be viewed with suspicion, and a lymph node should be removed for study. This is true regardless of the age at which it is discovered.

Winship and Chase[18] have shown that the tumor types found in children correspond quite closely to those found in the adult. They divide the pathologic groups into (1) pure papillary, which accounts for 16 per cent of the cases, (2)

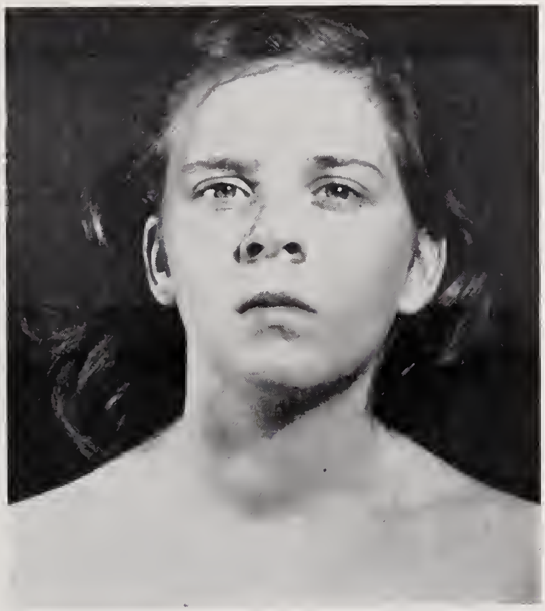


FIG. 1. Case 3. Preoperative appearance indicating size and position of thyroid nodule.

primarily papillary with follicular elements in 31 per cent, with the reverse relationship in another 18 per cent, (3) a purely follicular pattern, which occurs in 20 per cent, and (4) undifferentiated cancer, which makes up the remaining 15 per cent. These facts are based upon cases reported in the literature and their survey of unreported patients totaling 285 cases under 15 years of age. Sixteen per cent of this group died from their disease, and of these, two-thirds died from cancers having a papillary architecture. This reëmphasizes the necessity of regarding enlargement of cervical lymph nodes and thyroid tumors in children with grave suspicion.

Since the progress of the disease is the same in the child as in the adult, the therapy employed should be the same. Surgical extirpation is the treatment of choice. Although there is much discussion in the literature concerning the surgical procedure to be followed, and whether or not external irradiation should be employed, no one person has as yet accumulated a sufficiently large series of cases treated in the same manner with a follow-up of enough years to have statistical significance. However, the basic essential in the management of these problems is early recognition, with excision of all the cancer if it is found to be present.

ILLUSTRATIVE CASE

Case 3 (No. 56216). A 14-year-old girl was admitted to the Albany Hospital on January 20, 1948 because of a lump in the neck which the mother had first observed during November, 1947. The mass was painless and had not changed in size.

Examination revealed a nodule 3 cm. in diameter in the right thyroid lobe (figure 1). It was firm, smooth and nontender, but it seemed somewhat fixed to the deeper structures. The rest of the physical and laboratory examinations were normal.

On January 21, 1948, hemithyroidectomy was performed with removal of the nodule together with the isthmus of the thyroid gland.

The pathologist reported papillary cystadenoma on the specimen removed (figure 2). A review of these sections by other pathologists resulted in a diagnosis of papillary and follicular carcinoma.

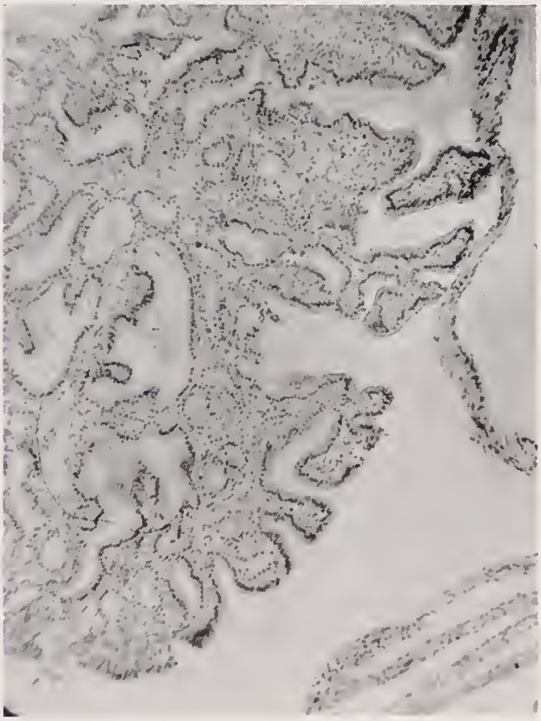


FIG. 2. Case 3. Tumor diagnosed benign by some pathologists, malignant by others.

The patient grew and developed in a normal manner. She married and has so far produced 2 normal children, aged 4 and 2½ years. She was seen on January 11 of this year, and no evidence of further thyroid disease is discernible. This case illustrates the difficulties in establishing a diagnosis, even pathologically, and the necessity for long-continued follow-up.

Unusual Pediatric Problems

The employment of soybean milk or other soybean products in the dietary management of infants and children may result in derangements of thyroid function. Rawson and Rall[19] report a case of a 1-year-old child who developed a goiter that nearly caused suffocation while on soybean milk. Biopsy taken at the time of tracheotomy was first reported as Hürthle-cell carcinoma of the thyroid, but subsequent examination revealed the goiter to be a benign condition due to a goitrogen. The process disappeared when the soybean milk was discontinued.

Cobalt chloride and ferrous sulfate used in the treatment of anemia are goitrogenic. The work of Klinck,[20] Holly,[21] Jaimet and Thode,[22] and Scott and Reilly[23] failed to demonstrate that these substances interfere with thyroid function, but reports of goiter developing in infants or children while receiving these drugs under the brand name of Roncovite are increasing and are too numerous to ignore. Caution is urged when this material is used in the treatment of anemia.

There are many theories concerning the etiology of simple, nontoxic diffuse goiter. Among these are the role of specific infectious organisms, the presence of goitrogens in the food, hereditary influences, abnormal mineral metabolism, and iodide deficiency. Assuring an adequate intake of iodide has not completely eliminated the occurrence of such goiters, although simple prophylaxis with iodized salt has greatly reduced the frequence of the most commonly accepted cause for this abnormality.

Hyperthyroidism

Hyperthyroidism in children under 15 years of age has also shown an increase in its frequence in the experience at the Albany Hospital. During the years 1918 to 1944, 33 patients were treated, but during the following 10-year period 17 patients were observed. Although toxic diffuse goiter in children presents much the same picture as in the adult, a few variations are worthy of mention.

In a series of 50 patients recently reported by McClintock, Frawley, and Holden,[24] the predominant symptoms were subjective in nature. These were increased nervousness, easy fatigability, irritability, and emotional instability. Since these symptoms are usually elicited from the parents, they are subject to interpretive errors, but their presence should alert the physician to possible thyroid disease. Predominance of nervous system symptoms is in contrast with the adult, in whom palpitation, weight loss, and tremors are the more common complaints. An enlarged thyroid gland was the predominant sign of childhood thyrotoxicosis and occurred in over half the patients in the Albany Hospital series. It was frequently the main reason for consulting a physician. Exophthalmos was also noted in more than 50 per cent of the children.

If laboratory aids are needed to substantiate the diagnosis, the determination of the serum protein-bound iodine and the per cent uptake of I^{131} are the most reliable. Generally, sound clinical judgment based upon the symptoms, signs and findings will lead to the diagnosis.

For the most part, surgical resection is held to be the best definitive therapy if a surgeon with considerable experience in the management of thyroid problems is at hand. Our policy in the Albany Hospital is to give these young patients the benefit of adequate medical treatment with antithyroid drugs, which must be maintained for 12 to 18 months. Then surgery is done if the following circumstances dictate: (a) failure of the drug due to toxicity, (b) relapse after a medically induced remission, (c) progressive enlargement of the goiter under therapy, (d) the existence of psychic factors on the part of the parent or child that make adequate observation of the necessarily prolonged therapy of doubtful value, and (e) economic problems of the family and persistence of mild hyperthyroidism under what is presumed to be adequate therapy. To be successful, we hold that a medically induced remission must produce permanent relief from the symptoms and leave the patient with no visible or obstructively large goiter. Full adult doses of the antithyroid drug employed should be given. The therapeutic use of I^{131} in this age group is too controversial to warrant its employment at the present time.

In our series of cases only 12 per cent showed any variation in growth pattern. It seems evident that hyperthyroidism that is not allowed to exist over longer periods of time because of recognition and adequate therapy produces no change in growth. Similarly, our series failed to demonstrate that maturation was delayed in any way. The onset of menses was within the normal age range, and those of marriageable age who could procreate by reason of marriage all demonstrated adequate fertility. These results contradict the oft-repeated statement that hyperthyroidism delays the menarche.

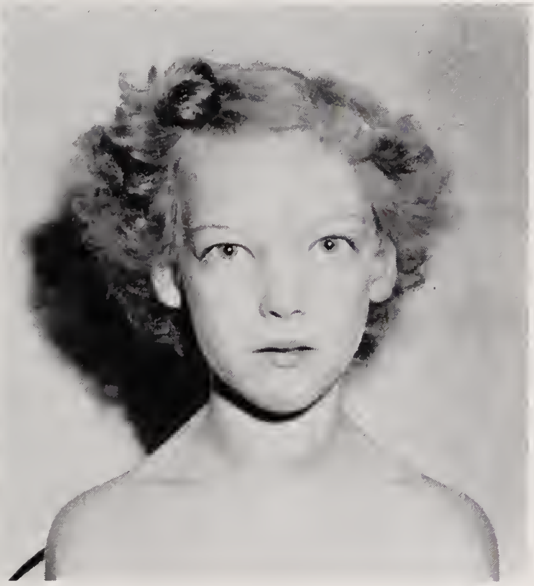


FIG. 3. Case 4. Appearance in September, 1948 when first seen. Note thyroid enlargement and widened palpebral fissures.

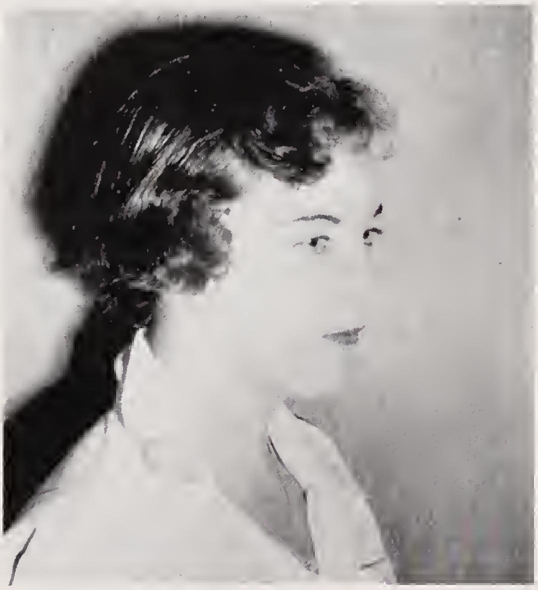


FIG. 4. Case 4. As she appeared in 1955. Note normal-appearing eyes, absence of obvious thyroid scar, and lack of thyroid enlargement.

ILLUSTRATIVE CASE

Case 4 (No. A-80566). A 9-year-old girl was first admitted to the Albany Hospital on September 24, 1948 because of nervousness, irritability, palpitation, diarrhea, heat intolerance, and a weight loss of 14 pounds during the previous year. An enlarged thyroid gland and eye changes had been observed by the mother.

On examination the pulse was recorded as 128 beats per minute, and the blood pressure was 142 mm. of mercury systolic with a diastolic of 62 and a temperature of 99.4° F. The thyroid gland was diffusely and symmetrically enlarged and firm, and bruits were heard over both lateral lobes. The skin was warm and moist; the outstretched fingers were tremulous. The reflexes were hyperactive. Bilateral widening of the palpebral fissures was observed, as was lid lag (figure 3). Proptosis was measured by the Hertel exophthalmometer and showed O.D. 17, O.S. 18 on a base of 93 mm. A BMR was reported as plus 45 per cent. Serum creatinine was 0.5 mg. per 100 ml. All other blood examinations were normal.

The patient received 5-iodo-2-thiouracil, sodium salt (brand name, Itrumil), 100 mg. twice daily, and was discharged to outpatient follow-up. The medication was temporarily interrupted because of sore throat, but when the white blood cell count was found to be 5,800 with a normal percentage of segmented forms, it was resumed at 250 mg. per day in divided doses. The patient gained 8 pounds, and on June 20, 1949, she reëntered the Albany Hospital, where subtotal thyroidectomy was done on the following day.

Since operation she has progressed and developed normally (figure 4). The menarche was established in November, 1952. From 1951 to date small amounts of exogenous thyroid hormone have been provided during the winter months in the amount of 30 to 60 mg. daily.

CONCLUSIONS

In hypothyroidism in children early recognition and institution of therapy are imperative if brain damage is to be avoided.

The diagnosis of hypothyroidism can usually be made on clinical evidence, but helpful laboratory tests are available.

The incidence of hypothyroidism in early life can be reduced if careful supervision of a pregnant woman on antithyroid therapy is maintained and if adequate iodide intake is provided to the normal pregnant woman.

Treatment of hypothyroidism in children consists of replacing the lack of endogenous thyroid hormone with an exogenous product.

Nodular goiter in children is almost invariably of the nontoxic variety, and a sufficiently high per cent are found to be malignant to require surgical excision of all such tumors for pathologic examination.

Hyperthyroidism is apparently increasing. Its treatment is the same as for an adult and usually is thyroidectomy. Evidence is available which indicates that adequately treated thyrotoxicosis does not interfere with the growth, development or maturation of these young patients.

N.B. The authors are indebted to Dr. Paul R. Patterson, Professor and Head of the Department of Pediatrics, and Dr. Thomas F. Frawley, Associate Professor of Medicine and Head of the Subdepartment of Endocrinology and Metabolism, Albany Medical College, for permission to present cases 1 and 2. These cases will also be published later as part of a series by Dr. Frawley.

BIBLIOGRAPHY

1. Weihl, C.: Ohio M. J., 1954, **50**, 1044.
2. Kearns, J. E., and Hutson, W. F.: Quart. Bull. Northwestern Univ. M. School, 1951, **25**, 270.
3. Schlesinger, B. (London), and Fisher, O. D.: Lancet, 1951, **2**, 289.
4. Noble, M. J., and Rowlands, S.: J. Obst. & Gynaec. Brit. Emp., 1953, **60**, 892.
5. Danowski, T. S., and others: Pediatrics, 1951, **7**, 240.
6. Talbot, N. B., Hoeffel, G., Shwachman, H., and Tuohy, E. L.: A.M.A. Am. J. Dis. Child., 1941, **62**, 273.
7. Talbot, N. B., and Sobel, E. H., in Levine, S. Z., and others, editors: Advances in Pediatrics. New York: Interscience, 1947, **2**, 238.
8. Talbot, N. B., Sobel, E. H., McArthur, J. W., and Crawford, J. D.: Functional Endocrinology from Birth through Adolescence. Cambridge, Mass.: Harvard, 1952, pp. 6–14.
9. Lerman, J., in Werner, S. C.: The Thyroid. New York: Hoeber, 1955, p. 725.
10. Pickering, D. E., and Miller, E. R.: A.M.A. Am. J. Dis. Child., 1953, **85**, 135.
11. Elphinstone, N.: Lancet, 1953, **1**, 1281.
12. Morris, D.: Ibid., 1953, **1**, 1284.
13. Bartels, E. C.: Lahey Clin. Bull., 1949, **6**, 68.
14. Winship, T., in Tr. Am. Goiter A. for 1951. Springfield, Ill.· Thomas, 1952, pp. 364–89.
15. Ward, R.: Am. J. Surg., 1955, **90**, 338.
16. Hayles, A. B., Kennedy, R. L., Beahrs, O. H., and Woolner, L. B.: A.M.A. Am. J. Dis. Child., 1955, **90**, 705.
17. Dailey, M. E., and Lindsay, S.: J. Pediat., 1950, **36**, 460.
18. Winship, T., and Chase, W. W.: Surg., Gynec. & Obst., 1955, **101**, 217.
19. Rawson, R. W., and Rall, J. E., in Pincus, G., editor: Recent Progress in Hormone Research. Acad. Press, 1955, **11**, 273.
20. Klinck, G. H.: J.A.M.A., 1955, **158**, 1347.
21. Holly, R. G.: Ibid., 1955, **158**, 1349.
22. Jaimet, C. H., and Thode, H. G.: Ibid., 1955, **158**, 1353.
23. Scott, K. G., and Reilly, W. A.: Ibid., 1955, **158**, 1355.
24. McClintock, J. C., Frawley, T. F., and Holden, J. H.: J. Clin. Endocrinol., 1956, **16**, 62.

THE TREATMENT OF THYROIDITIS*

BROOKS G. BROWN, M.D.

Clinical Instructor in Surgery, George Washington University School of Medicine; Attending Surgeon, Garfield Memorial Hospital, Washington

DURING THE PAST 100 years, since Bauchet published his monograph on 5 cases of acute inflammation of the thyroid gland, the subject of thyroiditis has gradually progressed through a period of confusion into one of beginning understanding. Misconceptions led different authors to designate one condition by two or more entirely different terms and hence to treat the same condition in entirely different ways. Progress was further impeded by the relative rarity of patients with this group of disease and by the philosophy of "Don't bother it until it bothers you."

With the work of such men as Klinck, Graham, Hazard, Winship and many others, a clearer understanding is evolving.

Certain it is that a patient cannot be treated properly until the clinician has a fair understanding of the disease he is treating. This is the challenge of thyroiditis.

For the purpose of discussion, thyroiditis may be classified as follows:[1]

THYROIDITIS

I. Infectious Thyroiditis
  A. Acute
    1. Non-suppurative
    2. Suppurative
  B. Chronic
    1. Non-specific
    2. Specific
II. Traumatic
III. Thyroiditis of Undetermined Etiology
  A. Granulomatous (subacute) thyroiditis
  B. Struma fibrosa (Riedel)
  C. Struma lymphomatosa (Hashimoto)
  D. Lymphocytic thyroiditis

Most patients with thyroiditis have been treated surgically over the years, and therefore the surgeons' interest has been maintained. Except for some of the cases of acute thyroiditis, we are still in the dark as far as the etiology is concerned. When reading of these conditions, we are still confronted with that monotonous statement, "The etiology is unknown."

Because of the difficulty of distinguishing thyroiditis from cancer, we are led to a surgical approach if for no other reason than to accurately establish the diagnosis.

INFECTIOUS THYROIDITIS

This condition is not as common as others.

Acute infectious thyroiditis presents itself with sudden onset, fever, chills, leukocytosis and variable symptoms and signs of inflammation. The inflammatory process may be localized or diffuse and may subside spontaneously or proceed to suppuration and abscess formation. In about half of the cases preëxisting thyroid disease, in the form of single or multiple adenomas, is said to be present. In this group the inflammation tends to be localized, whereas in the previously normal thyroid it is more likely to be diffuse.

Treatment[2, 3] is initially directed toward relief of symptoms and correction of any focus of infection outside the thyroid that may be the primary condition. Biopsy will most often establish the diagnosis, and cultures and sensitivity tests will dictate which, if any, antibiotic or chemotherapeutic agent will be effective. In some patients the process may subside without further treatment.

---

* Presented at the Fifth Midwinter Seminar of the Medical Society of the District of Columbia in Washington, D. C., February 15, 1956.

If suppuration occurs the infection may spread in any direction. Most frequently the pus dissects anteriorly through the ribbon muscles to the skin, but it may also extend into the mediastinum or rupture into the trachea or esophagus.

Abscess formation is said to occur more frequently in patients with preëxisting adenomas. Needle aspiration will establish the presence of pus, and cultures and sensitivity tests will direct the choice of antibiotic or chemotherapeutic agent.

Incision and drainage of the abscess through a collar incision is satisfactory treatment, although the wounds heal slowly in an average of 6 weeks

Incision and drainage, combined with subtotal lobectomy and removal of the infected adenomas, produces better results, the wounds healing on an average within 2 weeks.

Penicillin should be administered from the beginning but should be changed if cultures and sensitivity tests so indicate.

Patients exhibiting evidences of hyperthyroidism should be prepared for surgery with iodine.

Chronic infectious thyroiditis is rare and usually is a complication of the acute, nonsuppurative form. It may result from biopsy in the acute phase with a resulting sinus tract and chronic thyroid abscess. Such lesions require excision of the sinus tract and subtotal unilateral thyroidectomy.

Cases of chronic specific thyroiditis have been reported as resulting from syphilis, tuberculosis, actinomycosis, and Echinococcus. These are very rare, the diagnosis most frequently being made from a surgical specimen.

For the sake of completeness, one should mention the traumatic thyroiditis which may develop when trauma from accidents or war wounds allows the entrance of bacteria which may produce acute suppurative thyroiditis. Treatment is along the lines already described.

THYROIDITIS OF UNDETERMINED ETIOLOGY

It is in this group that the greatest number of cases of thyroiditis are encountered.

Granulomatous thyroiditis. This is a nonsuppurative inflammation of the thyroid gland characterized by sudden onset, local pain and pain referred to the jaw or ear, thyroid tenderness, and pain on swallowing. Obviously, it is difficult to distinguish this condition from acute infectious thyroiditis without biopsy.[4-7]

In the acute stage bed rest and the use of sedatives, anodynes and ice collars are helpful. If the disease is mild, this may be all the treatment necessary. Iodine, sulfonamides and antibiotics have been ineffective.[8, 9] Thiouracil and its derivatives have been credited with improvement by some investigators.[2, 10]

X-ray therapy in doses of 100 to 150 r daily, with a total dosage of from 200 to 2,000 r has produced very satisfactory results.[5, 11]

More recently cortisone and ACTH have been found to effectively produce subjective and objective improvement. Corticotropin, 80 units, given intravenously, resulted in relief of tenderness in 6 hours and decrease in firmness of the gland within 2 days. These results were reported by Crile and Schneider.[8] Other investigators have reported similar results. Withdrawal of the agent, however, was sometimes followed by recurrence of symptoms.

Subtotal thyroidectomy has been employed in those patients who do not respond to other forms of medical management. In some patients subjected to surgery symptoms have persisted or involvement of the remaining thyroid has subsequently occurred.[12]

Struma fibrosa (*Riedel's struma*).[13, 14, 15] As its name would indicate, this is a fibrosis of the thyroid gland that tends to involve also the adjoining muscles, blood vessels and nerves. It is very rare. Treatment is demanded by pressure symptoms, particularly those resulting from tracheal compression. The stony hardness of the gland arouses suspicion of malignancy. The condition is progressive, although the progress may be slow, and ultimately tracheal compression is produced.

X-ray treatment has little to offer. Treatment is primarily surgical and, after establishment of the diagnosis, is directed toward relief of symptoms. As Graham[15] has stated, struma fibrosa is irremovable. If the nature of the disease is not recognized at operation and radical extirpation is attempted, serious damage to the trachea, carotid sheath, or recurrent laryngeal nerves may result. Frozen section at the time of surgery will establish the diagnosis but may be made at the operating table from the gross appearance. Despite the extensive perithyroid involvement that may be present, only such surgery as is necessary to relieve pressure is recommended.

Struma lymphomatosa (*Hashimoto*).[10, 16-19] This is characterized by insidious enlargement of the thyroid gland, most frequently of the entire gland, that occurs predominately in women past 40 years. Pressure symptoms ultimately develop, but the perithyroid tissues escape involvement. Although hypometabolism and myxedema are uncommon preoperatively, after operation, or if the disease progresses without treatment, hypothyroidism is the rule. Recent publications have indicated an appreciable incidence of carcinoma in association with struma lymphomatosa.

The diagnosis may be established by needle biopsy. However, the possibility of carcinoma existing in such a gland inclines one to reluctance for such an approach. X-ray therapy, administration of desiccated thyroid and cortisone, alone, or in combination, have been employed with some success.

Various types of surgical procedures have been employed in an effort to relieve pressure symptoms. These vary from removal of the isthmus to total thyroidectomy. Recurrences are by no means rare in those patients who have had limited surgery, and re-operation has demonstrated no reversal of the pathologic process. The amount of tissue removed apparently does not influence the requirement for postoperative thyroid administration. And then there is always the suspicion of cancer. Therefore, it would seem that a reasonable approach, at least in the light of present knowledge, would be subtotal thyroidectomy with postoperative administration of desiccated thyroid.

Lymphocytic thyroiditis.[20] This is closely related to struma lymphomatosa. However, increasing evidence points toward its being a separate and distinct clinical entity. It differs from Hashimoto's disease in that it may occur at any age from 8 to 80 years, and in either sex; the patients are usually not hypothyroid either before or after surgery; and certain blood chemistry studies and histopathologic findings further indicate a difference. It is similar in its gross clinical and pathologic characteristics.

Surgical treatment is indicated for relief of symptoms of pressure and for establishing the diagnosis. Administration of desiccated thyroid is unnecessary.

BIBLIOGRAPHY

1. Hazard, J. B.: Am. J. Clin. Path., 1955, **25,** 289 and 399.
2. King, B. T., and Rosellini, L. J.: J.A.M.A., 1945, **129,** 267.
3. Reveno, W. S., and Rosenbaum, H.: New England J. Med., 1951, **245,** 364.
4. Giordanengo, G., in Notes, Comments and Abstracts. Lancet, 1938, **1,** 1144.
5. Crile, G., Jr., and Rumsey, E. W.: J.A.M.A., 1950, **142,** 458.
6. Lindsay, S., and Dailey, M. E.: Surg., Gynec. & Obst., 1954, **98,** 197.
7. Fraser, R., and Harrison, R. J.: Lancet, 1952, **1,** 382.
8. Crile, G., Jr., and Schneider, R. W.: Cleveland Clin. Quart., 1952, **19,** 219.
9. Crile, G., Jr.: Practical Aspects of Thyroid Disease. Philadelphia: Saunders, 1949.
10. Allen, A. L., and Reeves, R. I.: West Virginia M. J., 1951, **47,** 258.
11. Osmond, J. D., Jr., and Portmann, U. V.: Am. J. Roentgenol., 1949, **61,** 826.
12. Chesky, V. E., Dreese, W. C., and Hellwig, C. A.: Surg., Gynec. & Obst., 1951, **93,** 575.
13. Bothe, F. A.: Clinics, 1944, **3,** 215.
14. DeCourcy, J. L.: Surgery, 1942, **12,** 754.
15. Graham, A., and McCullagh, E. P.: A.M.A. Arch. Surg., 1931, **22,** 548.
16. Davison, T. C., and Letton, A. H.: J. Clin. Endocrinol., 1949, **9,** 980.
17. Blake, K. W., and Sturgeon, C. T.: Surg., Gynec. & Obst., 1953, **97,** 312.
18. Statland, H., Wasserman, M. M., and Vickery, A. L.: A.M.A. Arch. Int. Med., 1951, **88,** 659.
19. Dempsey, W. S., Dinsmore, R. S., and Hazard, J. B.: Cleveland Clin. Quart., 1949, **16,** 132.
20. Winship, T.: Personal communication.

PELVIC IRRADIATION FOR BENIGN LESIONS

ROLAND BIEREN, M.D.
Gynecologist, Group Health Association, Washington

PELVIC IRRADIATION has been employed commonly for benign uterine bleeding. It is occasionally indicated for endometriosis that is recurrent and unsuitable for surgery because of massive infiltration into vital structures.[1] At one time irradiation was the treatment of choice for menometrorrhagia because of hazard and inconvenience to the patient from hysterectomy.[2] Today, thanks to modern anesthesiology, antibiotics and blood banks, the poor surgical risk appears to be at the vanishing point, and few patients are now considered suitable for irradiation. Physicians are generally more willing to remove a grossly normal uterus by the abdominal or vaginal route for excessive bleeding, and elective total hysterectomy is the treatment of choice for persistent menometrorrhagia.[3]

There are valid objections to the use of irradiation for benign conditions. The one most often cited is that a cancer already present may be masked. Another is that an atrophic uterus is left for possible future malignant growth. Hundley, Diehl and Kardash[4] reported 1 instance of carcinoma which developed subsequent to the treatment of 225 patients with intracavitary radium for benign bleeding. Fortunately, under their system of control the diagnosis was made at an early stage of development. A third objection is that when a small myoma is apparently present a sarcoma may be overlooked. Smiley and Tandatnick[5] reported 3 cases of sarcoma diagnosed following irradiation and concluded that malignancy was already present in a myoma at the time of irradiation. Along with sarcoma the highly fatal mixed mesodermal tumor should be considered. This is also called carcinosarcoma of the uterus. Wilson, Graham, Thornton and Nokes[6] reported 6 cases and noted that it is unusual for patients to live more than 2 years once the diagnosis has been made. Klein[7] and Hill and Miller[8] reported several cases with prior irradiation for a supposedly benign lesion. A fourth objection to irradiation for a benign lesion is the fact that an artificial climacteric is precipitated, whereas surgery with the conservation of an ovary spares the woman this effect. Such individuals may have further troublesome bleeding spontaneously or as a consequence of estrogenic therapy. Finally, pregnancy subsequent to irradiation, while unlikely, might not be absolutely impossible. Such an occurrence would be undesirable, to say the least. Germ cells are highly sensitive, and the product would be almost certain to be seriously blighted.

The only justification for irradiation for excessive bleeding is certification of the patient as unsuitable for surgery. Extreme obesity, diabetes, decompensated heart disease, purpura and other conditions may make surgery unsuitable for a particular patient. Recurrent, massive endometriosis may be another indication for irradiation. There is no question about the fact that sporadic cases occur in which irradiation is the treatment of choice. Irradiation acts by bringing on the menopause, and an artificial menopause may be the lesser evil in selected patients.

When irradiation is chosen there should be no history of pelvic infection, either Neisserian or acid-fast, since both may be sharply aggravated by irradiation.

Fibromyomata and other pelvic neoplasms should be considered contraindications to irradiation simply because all neoplasms need surgical excision for correct diagnosis. Most instances of error by physicians in the use of irradiation for benign lesions are due to an incorrect diagnosis in the first place. I have seen 2 patients in whom cancer was overlooked because a curettage was not performed before the irradiation was given. In another case, ironically, the patient was treated for a cancer of the cervix which she did not have. She was subjected to radium application at the time of biopsy, and when the negative tissue report was ready it was too late. The most commonly overlooked condition is senile vaginitis.[9] I have seen patients who were treated by both irradiation and surgery for bleeding caused entirely by senile vaginitis. Finally, a history of previous irradiation should call for caution. It is possible that previous treatment has changed the patient's hematopoietic system so that another dose will have a fatal outcome, and I have had 1 such experience. Irradiation is not a completely innocuous treatment. Its effects are permanent and may be progressive. I have seen 3 patients who have become permanently and totally disabled as the result of pelvic irradiation for a benign lesion.

There are 3 types of irradiation that are available for clinical use. The first is X-rays. The second is radium, radon, or a device such as the cobalt bomb. The third is a drug or chemical that has been made radioactive which can be administered orally or parenterally. X-ray irradiation is the modality of choice. Modern machines, modern technology and protective devices, and the modern radiologist have made the use of radium obsolete. At present there is no place for radioactive drugs or chemicals in the treatment of benign pelvic conditions.

Physicians may be tempted to use radium because it is conveniently available by loan. Haphazard use of radium endangers everyone both to exposure and lawsuit. Recently Ritvo, D'Angio and Rhodes[10] have shown that instances of serious or even fatal injury as a result of overexposure to irradiation continue to occur. Doctors not trained in radiology are particularly apt to suffer. They are not aware of protection methods and overexpose themselves and others. Radium handling is especially prone to lead to this, and nurses and residents will repeatedly hold radium in their bare hands despite all admonitions not to. The best protection from radium is distance, and the smart physician will see to it that he stays at a sufficient distance from radium to prevent his insurance premiums from rising.

There are few immediate ill-effects from X-radiation therapy. It should not be administered during active bleeding, since it may provoke an exsanguinating hemorrhage. Mild nausea and bowel and bladder irritability soon subside. Three weeks after irradiation another menstrual period will occur, the so-called withdrawal period. After that the patient will evidence menopausal symptoms.

BIBLIOGRAPHY

1. Bieren, R.: Endometriosis. M. Ann. District of Columbia, 1953, **22**, 298.
2. Bieren, R. E., and Hundley, J. M., Jr.: Indications for removal of normal uterus. Am. J. Obst. & Gynec., 1947, **54**, 321.
3. Bieren, R.: Abnormal vaginal bleeding. Ibid., 1954, **67**, 1091.
4. Hundley, J. M., Jr., Diehl, W. K., and Kardash, T.: Treatment of benign uterine bleeding with intracavitary radiation. Ibid., 1952, **63**, 1234.
5. Smiley, I., and Tandatnick, J. W.: Leiomyosarcoma of uterus following radiation for hemorrhage from submucous fibromyoma. New York J. Med., 1951, **51**, 1504.
6. Wilson, L. A., Jr., Graham, L., Jr., Thornton, W. N., Jr., and Nokes, J. M.: Mixed mesodermal tumors of uterus. Am. J. Obst. & Gynec., 1953, **66**, 718.
7. Klein, J.: Carcinosarcoma of endometrium. Ibid., 1953, **65**, 1212.
8. Hill, R. P., and Miller, F. N., Jr.: Combined mesenchymal sarcoma and carcinoma (carcinosarcoma) of uterus. Cancer, 1951, **4**, 803.
9. Bieren, R.: Vaginitis in older women. Geriatrics, 1953, **8**, 429.
10. Ritvo, M., D'Angio, G. J., and Rhodes, I. E.: Radiation hazards to nonradiologists participating in X-ray examinations. J.A.M.A., 1956, **160**, 4.

DIFFUSE INTERSTITIAL PULMONARY FIBROSIS OF HAMMAN AND RICH

Report of a Case

ROBERT L. GUILLAUDEU, M.D.

Fellow in Cardiovascular Research, Georgetown University Medical Division, District of Columbia General Hospital

PAUL JAQUET, M.D.

Clinical Instructor in Medicine, Georgetown University School of Medicine

TWENTY YEARS have elapsed since Hamman and Rich[1] first described the syndrome of diffuse interstitial pulmonary fibrosis. Since 1935 about 27 cases have been reported in the world literature. Although the clinical and pathologic aspects of this syndrome have become more fully delineated, the etiology remains unknown. A truly effective treatment has not been found. Wider recognition of this disease and more thorough study of patients with this syndrome would provide answers to many perplexing problems.

Happily, if one can judge by the rapidly increasing numbers of case reports, this syndrome is becoming more frequently recognized. The following case is reported to call attention to the disease as well as the characteristic progressive decline in pulmonary function noted as the disease runs its course. A recent article[2] has emphasized the hazard of sudden withdrawal of cortisone or adrenocorticotropin support from patients with this disease. However, discontinuing hydrocortisone was thought to be necessary in our patient because of evidence of fluid retention. There was no immediate change in the patient's condition, but she died a month later of pulmonary insufficiency complicated by gastrointestinal bleeding.

REPORT OF CASE

A 61-year-old Negress was admitted to the District of Columbia General Hospital on November 10, 1954 because of severe shortness of breath. About 20 months prior to admission she had begun to have progressive shortness of breath, cough and loss of weight. When the cough was productive, a white, frothy, mucoid sputum, occasionally blood-streaked, was noted. An X-ray film of the chest was said to reveal bilateral infiltration of both lower lung fields. Sputum examinations did not reveal acid-fast bacilli.

Fourteen months before admission an exploratory thoracotomy had been performed. The pathologist interpreted the microscopic appearance of the lung tissue as chronic unresolved pneumonia. The attending physician, thinking that sarcoidosis was more likely, instituted 20 mg. of hydrocortisone twice a day, in addition to aspirin and Demerol for relief of her distressing dyspnea. On this regimen she was able to return home, although her activities were still markedly limited by dyspnea. Six months prior to admission she had noted pain in her eyes when she moved them and further loss of weight.

One month prior to admission she noted more rapidly increasing shortness of breath. Another physician noted distended neck veins, cardiomegaly and pitting edema of the lower extremities. An X-ray film of the chest taken November 4, 1954 was said to reveal a "bilateral increase in density, accentuation of the hilar markings and dilatation of the heart to the left." At this time the patient was digitalized and hydrocortisone discontinued. The dyspnea improved greatly with the use of mercurial diuretics and digitalis, although it still confined the patient to bed. Some swelling of the legs persisted, and the right forearm became swollen and tender. Because of difficulties in caring for the patient at home she was referred to the District of Columbia General Hospital.

On admission the patient complained of shortness of breath and pain in the right forearm and breast. She also described a substernal pain which radiated to the right of the manubrial notch and to a lymph node at the angle of the right mandible. The substernal and breast pains had been present since the time of the thoracotomy and were aggravated by respiration and coughing. The substernal pain was also relieved by food intake. She denied epigastric pain and bloody or tarry stools. A letter from her first physician referred to "arthritis" early in the course of her illness, but no further details were obtained.

A laparotomy for a pelvic abscess had been performed in 1933. She had also been treated for lues. The patient was born in Fredricksburg, Virginia and had lived in Brooklyn, New York and Washington, D. C. She had worked in laundries and as a domestic but denied dusty occupations or contact with broken fluorescent light bulbs.

Examination revealed an emaciated Negress, breathing very rapidly and shallowly while sitting in a wheel chair. Her temperature was 100° F, the pulse rate 120 per minute, the respiratory rate 60 per minute, and the blood pressure 90/60 mm. Hg.

Pertinent physical findings were as follows. The eyes were sunken, but no enlargement of the lacrimal gland was seen. Arcus senilis was present bilaterally. The pupils reacted sluggishly to light. Lenticular opacities prevented adequate visualization of the fundi. The tongue was diffusely reddened but not slick or tender.

Paroxysms of dry coughing occurred frequently. After each paroxysm the patient would have a period of apnea lasting 5 to 10 seconds. Accessory muscles of respiration were being used vigorously. The anterior-posterior diameter of the chest was increased. The intercostal spaces were seen to bulge on expiration. The percussion note was resonant throughout all lung fields. Breath sounds were bronchovesicular with cogwheel inspiratory sounds, especially at the bases. Coarse moist rales were heard throughout the respiratory cycle, and expiratory wheezes were heard over the lower lung fields.

The heart was enlarged to the left. A grade 2, blowing, systolic murmur was heard over the precordium. The pulmonary second sound was accentuated. A midline suprapubic scar showed no evidence of keloid formation. A brown stool gave a negative reaction for occult blood.

There was moderate pitting edema of both lower legs and hips. The right forearm (especially the palmar aspect) and distal upper arm were edematous, warm and tender. In the upper arm the tenderness seemed to be confined to the brachial vein. The edema stopped abruptly halfway between the elbow and the axilla.

Fluoroscopy revealed fair motion of the diaphragm. No areas of air-trapping were seen. A mottled increase in density was seen throughout both lungs. This density tended toward confluence in the right lower lung field. Enlargement of the heart, mostly the left ventricle, was also seen (figure 1).

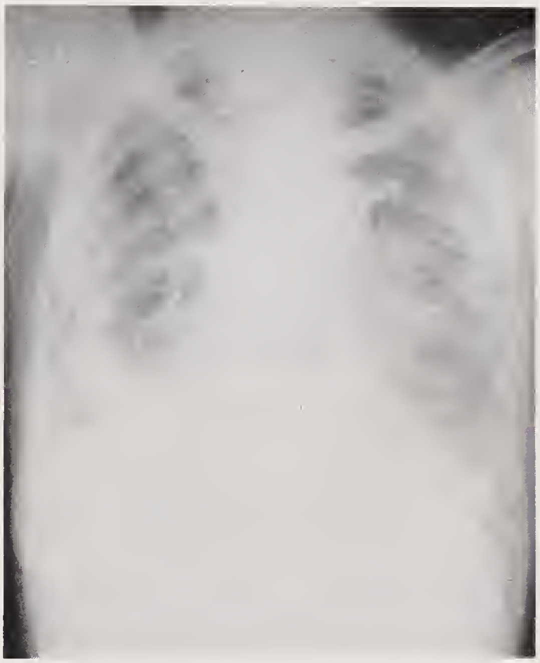


FIG. 1. Appearance of chest after initial diuresis; tendency toward confluence, especially in right lower lung field.

The blood count on admission revealed: hemoglobin 10 Gm. per cent, hematocrit 35 per cent, and white blood cells 6,800 per cu. mm. with a marked shift to the left. The corrected sedimentation rate was 32 mm. per hour. The admission urinalysis had a specific gravity of 1.022 and contained a trace of albumin. The blood urea nitrogen was 14 mg. per cent. The total serum protein was 7 Gm. per cent with 2.1 Gm. per cent of albumin. The serum calcium was 9.9 mg. per cent and the inorganic serum phosphorus 3.5 mg. per cent. The alkaline phosphatase was 4.3 Bodansky units.

Seven blood cultures remained sterile. Sputum and gastric washings revealed no acid-fast bacilli. The tuberculin test was positive at 48 hours.

A low sodium diet was ordered, and the patient was given symptomatic treatment for cough. On the second day a course of procaine penicillin was begun and a small dose of a mercurial diuretic was given. No further diuretics were necessary. Nasal oxygen gave no relief. Frequent prolonged paroxysms of coughing were partially relieved with codeine and expectorants.

After the initial improvement resulting from diuresis it became apparent that the patient was slowly losing ground. The slightest effort provoked extreme tachypnea. Fever persisted the first week in the hospital and reappeared with the onset of gastrointestinal bleeding.

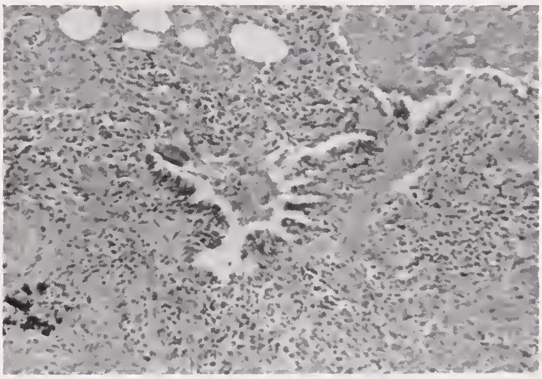


Fig. 2. Biopsy section of a bronchiole showing infiltration in the wall with exudate in the lumen and loss of epithelial lining in one area.

On the morning of the thirteenth hospital day blood was aspirated from the stomach in the course of a gastric lavage. No untoward symptoms followed this, and the blood was attributed to the lavage tube. The following morning the patient passed a large, grossly bloody liquid stool. She became disoriented and quite lethargic without other change in her vital signs. The skin remained warm and dry. Proctoscopy revealed dark liquid blood coming from above 14 cm. After an initial rise in the blood urea nitrogen to 55 mg. per cent it returned to normal. Four units of whole blood was given, and the hematocrit rose from 18 to 36 per cent. After transfusion she admitted having a mild mid-epigastric pain intermittently over the preceding month. She described the pain as burning or gnawing and stated that it was sometimes relieved by food. She was placed on a modified ulcer regimen.

On the twentieth day of her hospital course an X-ray examination of the upper gastrointestinal tract revealed no abnormality. The following day the patient again passed a tarry stool. Clinical findings and response to transfusion were similar to those following the first bleeding episode. During the following week without further evidence of blood loss and with a hematocrit of 39 per cent the patient again became lethargic and disoriented. She died without incident on the twenty-eighth hospital day. Permission for autopsy was refused.

Review of the slides of lung tissue removed at biopsy (figures 2 and 3) in September, 1953 revealed changes typical of diffuse interstitial pulmonary fibrosis, as described by Hamman and Rich.[1]

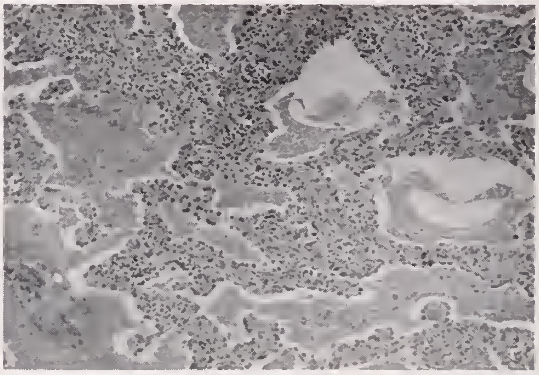


Fig. 3. Biopsy section, showing well the thickening, fibrosis and increased cellularity of alveolar walls. Some alveoli are lined with cuboidal epithelium. Note absence of polymorphonuclear response in the exudate which fills the alveoli.

COMMENT

This patient's illness was characterized by slow, relentless loss of pulmonary function. The duration of symptoms was about 20 months. This is a longer duration of symptoms than that of the cases reported by Hamman and Rich.[3] However, recent articles[4, 5] have also reported a longer symptomatic course. Hydrocortisone may have prolonged the course of the disease.

Cyanosis was not clinically evident in this patient. Unless severe, cyanosis is difficult to evaluate clinically in the presence of anemia and particularly in Negroes. The low hematocrit would decrease the amount of circulating reduced hemoglobin.

The gastrointestinal bleeding is interesting, since a duodenal ulcer was reported in a case of diffuse interstitial pulmonary fibrosis by Callahan et al.[6] Walzer and Frost,[7] reporting 54 cases of cor pulmonale with autopsy, stated that 2 patients of the series had died of hemorrhage from gastric ulcers. Recent work with Diamox suggests that the action of carbonic anhydrase is potentiated by systemic acidosis. In the presence of respiratory acidosis one would expect even greater potentiation of carbonic anhydrase, and, therefore, excessive production of hydrochloric acid in the stomach since the carbonic anhydrase system is intimately involved in the production of hydrochloric acid by the stomach. Since the patient was not receiving steroid hormones in the hospital, we see no reason to implicate them in the causation of the gastrointestinal bleeding.

Discussion

The clinical course of diffuse pulmonary fibrosis is dominated by loss of pulmonary function which relentlessly progresses until the patient dies of pulmonary insufficiency or cor pulmonale. The chief symptom is shortness of breath. Associated symptoms are cough and those symptoms associated with cor pulmonale. The physical findings are not specific. Tachypnea, rales and wheezes, cyanosis, and the signs of cor pulmonale are most frequent. Fever, splenomegaly and lymphadenopathy are less constantly reported. Radiologic evidence of pulmonary fibrosis should lead to further diagnostic procedures. If the Hamman-Rich syndrome is present, it will be identified by microscopic examination of lung tissue.

Sections of lung show enlargement of the lining of alveoli with formation of a cuboidal epithelium, and necrosis of these lining cells and of the epithelium of bronchioles. Some alveoli are partially lined by a hyaline membrane, and there are edema and fibrin deposition in the walls of alveoli. There is extensive and diffuse fibrosis throughout all lobes of both lungs. Focal organization of intra-alveolar hemorrhage is seen. Purulent exudate and bacteria are not seen. Polymorphonuclear leukocytes are rare or absent in the tissue and in the alveolar exudates.

It is interesting to digress and consider the pathophysiologic basis of our patient's dyspnea. In general the presenting complaint of shortness of breath may be attributed to defects in one or more of the following areas: pulmonary, cardiac, hematologic and neurologic. This patient had defects in each of these spheres. Her hematocrit, though low, would not usually be thought of as a primary cause of her dyspnea, although with her other difficulties it may well have been a significant contributing factor. Pulmonary dyspnea may be subdivided into difficulties in ventilating alveoli and those in gas transfer across the alveolocapillary membrane. To some extent these defects overlap with those of the other areas. However, the generalized fibrosis and the occlusion of alveoli and bronchioles cause inadequate ventilation of alveoli. An alveolocapillary barrier to gas transfer also obtains because of the edema of alveolar walls, the enlargement of alveolar lining cells, and the hyaline membrane lining some alveoli. This patient exemplifies the additional dyspnea caused by congestive failure in her response to mercurial diuretics. Neurogenic dyspnea may be considered to include the respiratory neurosis of the hyperventilation syndrome as well as the increased sensitivity of the vagal stretch reflexes found in states of increased stiffness of the lung such as pulmonary edema and pulmonary fibrosis.

The pathologic findings determine the radiologic appearance of the chest film. Early changes are increased vascular markings. Later a reticulated pattern appears, especially in the lower lung fields. The earlier appearance in the lower lung fields may be due to the increased depth of the lungs at this level rather than to increased fibrosis at the bases. Further progression of the lesions leads to increasing fibrosis which in some areas may give the appearance of bronchopneumonia or of confluence. On fluoroscopy localized areas of air-trapping may be seen. In some cases the fibrosis may fix the mediastinum to the lateral chest walls such that on inspiration the mediastinum is seen to shorten and widen instead of lengthening and narrowing. The X-ray appearance is in no way diagnostic of the Hamman-Rich syndrome, and does not differentiate it from other types of diffuse pulmonary fibrosis.

The differential diagnosis includes all causes of pulmonary fibrosis. The history gives many important clues. History of exposure to sources of fungus infections, silicosis, and other pneumoconioses may turn one from consideration of the syndrome. A history of systemic or respiratory diseases which may lead to pulmonary fibrosis should be sought. Findings on physical examination are not specific. However, Hamman and Rich commented on the extreme tachypnea seen in their patients, referring to it as a "panting" type of respiration. Cyanosis and the signs of cor pulmonale may also point to the diagnosis. Definitive diagnosis is made by microscopic examination of lung tissue. Pulmonary biopsy is attended by little risk to the patient in proper hands.

The cause of diffuse interstitial pulmonary fibrosis as described by Hamman and Rich remains unknown. Several authors have speculated as to a virus etiology or some relation to the collagen diseases. That an altered state of tissue reactivity is present seems to be a reasonable assumption. Almost identical pathologic findings have been present in pulmonary fibrosis associated with hexamethonium therapy and secondary to a disease (possibly histoplasmosis) described by DuBose et al.[8] There are suggestions of a sort of idiosyncrasy in the pulmonary reactions to beryllium phosphors.

SUMMARY

A case of diffuse interstitial pulmonary fibrosis of Hamman and Rich complicated by gastrointestinal bleeding is reported. Attention is directed to the association of peptic ulceration with chronic pulmonary disease. The clinical findings associated with the Hamman-Rich syndrome are discussed, with particular attention to the tachypnea and causes of the dyspnea.

BIBLIOGRAPHY

1. Hamman, L., and Rich, A. R.: Fulminating diffuse interstitial fibrosis of lungs. Tr. Am. Clin. & Climatol. A., 1935, **51,** 154.
2. Peabody, J. W., Jr., Buechner, H. A., and Anderson, A. E.: Hamman-Rich syndrome; analysis of current concepts and report of 3 precipitous deaths following cortisone and corticotrophin (ACTH) withdrawal. A.M.A. Arch. Int. Med., 1953, **92,** 806.
3. Hamman, L., and Rich, A. R.: Acute diffuse interstitial fibrosis of lungs. Bull. Johns Hopkins Hosp., 1944, **74,** 177.
4. Beams, A. J., and Harmos, O.: Diffuse progressive interstitial fibrosis of lungs. Am. J. Med., 1949, **7,** 425.
5. Schechter, M. M.: Diffuse interstitial fibrosis of lungs. Am. Rev. Tuberc., 1953, **68,** 603.
6. Callahan, W. P., Jr., Sutherland, J. C., Fulton, J. K., and Kline, J. R.: Acute diffuse interstitial fibrosis of lungs. A.M.A. Arch. Int. Med., 1952, **90,** 468.
7. Walzer, I., and Frost, T. T.: Cor pulmonale; consideration of clinical and autopsy findings. Dis. Chest, 1954, **26,** 192.
8. DuBose, H. M., Meador, R. S., and McCain, B. E.: Pulmonary fibrosis due to chronic granulomatous pneumonitis of unknown etiology. Am. J. Med., 1954, **17,** 151.

President's Page

GOLDEN ANNIVERSARY

Nearly a quarter of a century has passed since the Southern Medical Association last met in Washington. To be exact, it was in 1932, the year that marked the beginning of the Great Depression, as well as the New Deal. The Association is paying a return visit to the Nation's Capital under far different political and economic conditions. While they may find it interesting to speculate on the changes which have taken place in the intervening years and their historic significance, members of the Association will not lose sight of one fact—that is, SMA is celebrating its Golden Anniversary.

Our Society has abandoned its ANNUAL SCIENTIFIC ASSEMBLY for 1956 to help the Association celebrate this milestone in its history. In return, the Association has designated the first day of its meeting "D. C. Day." Dr. Marcel Foret is Chairman of the Program Committee for the "Day." He and his associates have done a splendid job. The Committee has selected with care several physicians from Washington who will present a program holding great interest for both specialists and general practitioners.

Chairman of the local Committee on Arrangements for the remainder of the meeting is Dr. Oscar B. Hunter, Jr. Other committee chairmen are: Advisory, Dr. Charles S. White, Sr.; Membership, Dr. Alan Frank Kreglow; Publicity, Dr. William B. Walsh; Information, Dr. August Kramm; Scientific Exhibits, Dr. Arthur A. Morris; Scientific Motion Pictures, Dr. Brooks G. Brown; Alumni and Fraternity Dinners and Luncheons, Dr. William O. Bailey, Jr.; Golf, Dr. Richard H. Fischer; Women Physicians, Dr. Helen Gladys Kain.

I had the pleasure of attending a meeting of the local Committee on Arrangements not long ago and was very favorably impressed by the enthusiasm of its members and the accomplishments to date. I came away confident that the Association's Golden Anniversary would be the memorable occasion hoped for.

Ralph M. Caulk

Editorials

THE RELEASE OF POTENT DRUGS TO OVER-THE-COUNTER SALES

This year, 1956, marks the fiftieth anniversary of the Federal Food, Drug, and Cosmetic Laws; and 1956 is also the year when attempts are being made to release potent strengths of hydrocortisone ointments and lotions from prescription use to over-the-counter sales.

Any drug which has some possibility of being relatively safe in the hands of the public, and which also has a high public interest, will always appeal to *some* drug companies as a good sales item. The drug business is a big business and also very competitive, and there will always be companies eager to "steal a march" on their competitors. The main reason for releasing a so-called "wonder drug" to over-the-counter use is simply one of dollars and cents. A good example of this was the release some years ago of some antihistamines to over-the-counter sales. It is true that they used the least effective antihistamine of all, and also used it in a very weak strength; but the flood of antihistamines in pills, sprays, eye-drops, nose-drops, ointments and lotions which were sold across the counter was amazing to see. Now after one or two years these are just another "patent medicine" with low sales appeal.

Perhaps one may point a finger at the doctors who fight against this over-the-counter sales of drugs and say that they have an economic reason, in that the patients who will buy drugs over the counter will be spared the expense of an office visit to the doctor. This is a false premise, as can be attested by the increase rather than the decrease of visits resulting from the release of over-the-counter antihistamines and various antibiotics in troches and ointment forms, etc. Compare the cost to the patient who comes to the doctor for an early diagnosis and simple plan of treatment with the "do-it-yourself" patient who comes in with more complications resulting in longer medical care.

This is beautifully illustrated again by the antihistamine story with the many cases of contact dermatitis resulting from the local use of drugs, the asthmatic complications of hay-fever treated over-the-counter, and the pneumonias resulting from colds treated by the "wonder drug cold tablets," etc.

The drug companies have a definite business interest in these drugs. The Food and Drug Administration is the impartial judge, and, if the public is to be guarded and protected, physicians as a whole should have the most important role of supplying information, on the basis of their experience, as to the value and safety of the drugs that people use. How can the doctors supply this information when the vast majority are not even aware of the problem? The drug companies are organized, informed, and act as a well-organized team. The Food and Drug Administration has its regulations to establish procedures for the transfer of drugs to over-the-counter sales, but the physician in practice, who treats and examines the patient, is scarcely notified about these events. It is true that the central organizations of the American Medical Association and some national allergy and dermatological societies did receive formal notices of the pending hearing, but the only information that physicians as a whole received

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia.

was contained on page 56 of the *Journal of the American Medical Association*, April 14, 1956, which consisted of 5 or 6 lines buried in the miscellaneous column of the Washington News, and not even honored by having a paragraph to itself.

Although it is important whether hydrocortisone ointments are or are not released for over-the-counter sale, it is of even more vital importance that we physicians be better informed of pending decisions on drugs, so that our varied experience and information can be used for an impartial evaluation of the facts and thus the safety of the public be assured.

Alvin Seltzer, M.D.

THE WASHINGTON HOSPITAL CENTER

When the Washington Hospital Center opens its doors in the summer of 1957, it will house three of Washington's oldest and finest hospitals, Episcopal, Garfield and Emergency, as well as a School for Nurses.

Operating as a single unit administratively and clinically, the Washington Hospital Center will be a voluntary, nonprofit institution.

Located on 47 acres on the south end of the Soldiers Home tract, between Michigan Avenue and the proposed new East-West Freeway in northwest Washington, it will be easily accessible from 6 convenient approaches. Air-conditioned throughout, the hospital buildings will have a gross area of 788,190 square feet. There will parking space for 1,100 cars.

This 800-bed hospital will provide for medical, surgical and obstetrical patients, and for emotionally disturbed patients requiring short-term psychiatric treatment. Chest X-ray screening for all patients will be available.

Three floors of the main wing of the hospital building will be occupied by the outpatient department, where 400 patient visitors can be accommodated daily.

Planned to provide 24-hour emergency service, the emergency area of the outpatient department will have 2 10-bed observation wards, 1 for male and 1 for female patients, a general waiting room, a nurses' control station, a room for reporters and police, a security room, a room for accompanying relatives, 4 emergency treatment rooms, a doctors' room, and a nurses' room. The Emergency Department can be reached from a covered driveway at the south end of the hospital, where sheltered space for ambulances and other vehicles will facilitate the transportation of the sick and injured.

The patient nursing floors will occupy 4 wings, with facilities for approximately 40 patients on each of the 5 floors in each wing. All nursing floors will have 14 2-bed rooms and 12 single-bed rooms. Every room will have a toilet and lavatory, and 36 rooms will have private baths. Each room will be equipped with wall outlets for oxygen and vacuum.

The use of air-conditioning has permitted locating the X-ray Department underground. This has minimized the problem of radiation shielding. A 2,000 K.V. deep therapy machine will be installed in a separate underground room, which will be connected with the main radiology area.

The clinical laboratory, which will contain among other features a blood bank and a tissue bank, will be located underground on the same level as the X-ray Department.

The surgical suite will be shaped somewhat like a race track, with the "track" being a corridor going completely around the suite. This will afford an outside entrance for patients into the 15 operating rooms regularly arranged around the inside of the track. The "infield" is the work space for nurses and the surgeons' scrub-up area.

The Center will have the facilities and staff to furnish not only good patient care, but an excellent teaching program for residents, interns, nurses, and medical technicians. The lay boards and medical staff members of the 3 merging hospitals are firmly convinced that one way to meet the current shortage of nurses is to continue the nursing school now in existence at one of the hospitals, Garfield Memorial. It took a high degree of optimistic resolution to take on a known deficit operation for the good of the community. The 8-story Nurses' Home will accommodate 250 student nurses and 50 resident nurses and will have complete training school facilities.

The success of a teaching program in a voluntary hospital is closely dependent on a coördinated plan for participation of the nonprofit hospital in the indigent care program of the community, with remuneration at least equal to the cost of the same service in a public institution. The work of the District Medical Society toward this objective has greatly encouraged all concerned with the launching of a new hospital in these days of rising costs of hospital care.

The 3 merging hospitals, Episcopal, Garfield Memorial and the Central Dispensary and Emergency Hospital, have made great contributions to the total health program of Washington for many decades. The Washington Hospital Center hopes to carry on their splendid achievements.

W. T. Brown, M.D.
Administrator,
Washington Hospital Center

COMMITTEE APPOINTMENTS

July first marks the beginning of a new year in many professional and non-professional activities, particularly in medicine. The medical schools have released several thousand embryo physicians who seek hospital appointments; interns and residents in many institutions complete their periods of advanced instruction and look for remunerative positions or associations, and hospitals reorganize their staff affiliations. Many medical societies seat their appointed officers, who in turn set up their committees for the ensuing year.

It is a period of evolution, without fanfare or ostentation, but withal a potent influence in the futures of those whom it touches. We can pass over the interns and residents and consider the physician who enjoys an active practice. Does this change about him alter his routine, his mode of living, his relations with his colleagues?

If he is keenly interested in his profession, he will sense his responsibility to maintain a high standard for its objectives. All state, city or county societies need sound organization with officers and committees to steer it, and only by their diligent efforts can the proper standards of medicine be maintained. To do this effectively the membership must serve on various committees without thought of compensation and at a sacrifice of time. Every member of a medical association should accept, when called upon, membership on a committee unless he can justly disqualify himself. Acceptance of an appointment implies that the appointee will attend committee meetings regularly and participate actively in the work.

It devolves on the appointing officer or officers to select with great care the fitness of the chairman of each committee, and the qualifications should be directly related to the duties of the committee. If the appointee has discharged his duties creditably in the past, there is no good reason why he should not succeed himself. Past performance should outrank personal relations or outside pressure.

It is not amiss to consider successors to chairmen in the nature of vice-chairmen, who receive a valuable indoctrination in their initial membership, that permits a continuity of accomplishment from year to year. There is a dual responsibility in the annual make-up of the slate. Every member should accept his assignment and all that it implies, and the appointing body should make its selection strictly on the basis of ability and integrity.

There never has been a time when the relations of medical societies have penetrated so many fields; it behooves them to guard their rights jealously and, at the same time, give their best for the health of the people they serve.

CHARLES S. WHITE, M.D.

RETARDED CHILDREN'S CLINIC AT GEORGETOWN HOSPITAL

On August 1, 1955, a clinic for mentally retarded children was opened at Georgetown University Hospital. This project was designed to help meet one of the pressing problems in this community, the complete diagnostic evaluation of the mentally retarded child.

The stimulus for its establishment came directly from the National Association for Retarded Children groups in the District of Columbia and its surrounding counties. The Junior League of Washington has underwritten the major share of the clinic costs over a 3-year period and is providing essential voluntary help in assisting with in- and outpatient cases. The recently formed group, Help for Exceptional Little People, is offering financial and voluntary assistance. The administration of the clinic is vested in the Georgetown University Medical Center. The professional direction of the clinic stems from the Departments of Neurology, Pediatrics and Psychiatry.

PURPOSES OF CLINIC

The clinic is designed to provide physicians of the community with a centralized service for securing a diagnostic evaluation of their retarded children. It tries to determine the capabilities of each child and how to make the fullest use of these limited capabilities. It is set up to assist parents in their adjustment to the problem and to help them train and educate these children.

In addition to being an information center, it helps to coördinate community efforts in attacking the problem of retardation. Obtaining funds to promote research in the field of mental retardation is a major objective.

OPERATION OF THE CLINIC

The personnel of the diagnostic unit is composed of three physicians, Dr. Richard M. Auld, pediatrician; Dr. Bushnell Smith, neurologist; and Dr. Sydney Salus, child psychiatrist. There are 4 other people on the staff, secretary, psychiatric social worker, clinical psychologist, and pediatric nurse. Parents are interviewed and seen by each member of this group. Outside medical records of the patient are obtained, and selected laboratory examinations are performed during a work-up period. When necessary to perform pneumoencephalography or other more complicated procedures, the patient is admitted to the Hospital. Following evaluation a combined case conference is held, and parents are seen for interpretation interviews.

All patients are referred to the clinic either by private physicians or social agencies. The clinic takes over none of the therapy of the children, and all diagnoses and therapeutic services are sent to the referring source. Recommendations for the future care of the child are also given to the parents.

Selection of patients. Children will be seen between the ages of early infancy and 14 years. If parents are unable to pay the fees, they are referred to the outpatient department admitting service for financial evaluation. Funds have been provided by local associations for retarded children to help pay the fees of those who are unable to meet a full or partial payment.

FEES FOR EVALUATIONS

1. Complete outpatient work-up: parent interviews; neurological, pediatric, psychiatric and psychological examinations and interpretation interviews	$15.00
2. Laboratory tests, including skull, bone age and chest X-rays, electroencephalography, blood counts, serology, tuberculin testing, routine and special urinalyses, toxoplasma serologic studies, and certain blood chemical and thyroid studies as indicated. This fee is the same whether tests are done as in- or outpatients	$65.00

(Continued on page 472)

DELEGATES' REPORT ON ANNUAL MEETING OF AMA IN CHICAGO, JUNE 11-15, 1956

The Chicago meeting was marked by an unprecedented heat wave that dragged down attendance at scientific meetings and exhibits—may have played some part in warming the discussions of the House of Delegates. Outstanding in the deliberations of the House were problems of hospital accreditation, evaluation of graduates of foreign medical schools, private practice by members of medical school faculties, and Federal aid to medical education.

Election of Officers

Dr. David B. Allman, surgeon of Atlantic City, N. J., was named unanimously as President-elect for the coming year. A member of the AMA Board of Trustees since 1951 and also Chairman of the Committee on Legislation, Dr. Allman will become President of the American Medical Association at the June, 1957 meeting in New York City. He will succeed Dr. Dwight H. Murray, of Napa, Calif., who took office at the Tuesday evening inaugural program in the Chicago Civic Opera House.

Other officers elected were as follows: Dr. F. S. Crockett, of Lafayette, Ind., Vice President; Dr. George F. Lull, of Chicago, Secretary; Dr. J. J. Moore, of Chicago, Treasurer; Dr. E. Vincent Askey, of Los Angeles, Speaker, and Dr. Louis Orr, of Orlando, Fla., Vice Speaker.

Dr. Julian P. Price, of Florence, S. C., was reelected to the Board of Trustees, and Dr. Hugh H. Hussey, of Washington, D. C., was named to succeed Dr. Allman. Dr. Robertson Ward, of San Francisco, was elected to the Judicial Council to succeed Dr. Walter F. Donaldson.

Reëlected to the Council on Medical Education and Hospitals were Dr. Guy A. Caldwell, of New Orleans, and Dr. John W. Cline, of San Francisco. Dr. Walter E. Vest, of Huntington, W. Va., was named to succeed Dr. Louis A. Buie on the Council on Constitution and By-laws.

Elected to the Council on Medical Service were Dr. Carlton Wertz, of Buffalo, N. Y., to succeed himself, and Dr. J. F. Burton, of Oklahoma City, to succeed the late Dr. A. C. Scott, Jr., of Texas. Named for the three new places created on the Council on Medical Service were Dr. Thomas Danaher, of Torrington, Conn.; Dr. R. M. McKeown, of Coos Bay, Oregon; and Dr. Lafe Ludwig, of Los Angeles.

The House of Delegates selected Dr. Walter L. Bierring, of Des Moines, Iowa, as recipient of the 1956 Distinguished Service Award of the American Medical Association for his long and outstanding contributions to medicine and humanity. Dr. Bierring, a Past President of the AMA, was honored for his achievements in the fields of public health and medical examining board work. He formally accepted the award at the Tuesday inaugural program.

Hospital Accreditation

As a result of action taken by the House of Delegates in June, 1955, the Speaker had appointed the Committee to Review the Functions of the Joint Commission on Accreditation of Hospitals. The report of that Committee by its Chairman, Dr. Wendell C. Stover, was one of the highlights of the 1956 meeting.

The Committee reviewed the organization and activities of the Joint Commission and concluded that accreditation should indeed be continued. It was deemed advisable to maintain the present representation of agencies on the Joint Commission.

Under activities of the Joint Commission, the Committee noted that the Commission has no punitive function, therefore cannot interfere directly with hospital policies that are inimical to a particular group of physicians (e.g., general practitioners).

Other conclusions were as follows:

The Board of Trustees should report annually to the House of Delegates on the activities of the Joint Commission.

Physicians should be on the administrative bodies of hospitals.

General practice sections in hospitals should be encouraged.

Staff meetings required by the Joint Commission are acceptable, but attendance requirements should be set up locally and not by the Commission.

The Joint Commission should not concern itself with the number of hospital staffs to which a physician may belong.

The Joint Commission should publicize the method of appeal to hospitals that fail to receive accreditation.

Reports on surveys should be sent to both administrator and chief of staff of hospital.

Surveyors should be directly employed and supervised by the Joint Commission.

Surveyors should work with both administrator and staff.

New surveyors should receive better indoctrination.

Blue Cross and other associations should be requested not to suspend full benefits to non-accredited hospitals until those so requesting have been inspected.

The American Medical Association should conduct an educational campaign for doctors relative to the functions and operations of the Joint Commission.

The Committee also suggests that the American Medical Association and the American Hospital Association encourage educational meetings for hospital boards of trustees and administrators either on state or national levels to acquaint these bodies with the functions of accreditation.

The House also approved a reference committee suggestion that the following statement be added to strengthen the report:

"The Committee recommends that the Commissioners to the Joint Commission on Accreditation of Hospitals, appointed by the Board of Trustees of the American Medical Association, urge that Commission to study:

1. The problems of the exclusion from hospitals and arbitrary limitation of the hospital privileges of the general practitioner, and
2. Methods whereby the following stated principles may be achieved:

" 'The privileges of each member of the medical staff shall be determined on the basis of professional qualifications and demonstrated ability.

" 'Personnel of each service or department shall be qualified by training and demonstrated competence, and shall be granted privileges commensurate with their individual abilities.' "

Graduates of Foreign Medical Schools

The House of Delegates approved in principle a program for the evaluation of graduates of foreign medical schools seeking hospital positions in the United States. The proposed program was developed by the Coöperating Committee on Graduates of Foreign Medical Schools, representing the AMA Council on Medical Education and Hospitals, American Hospital Association, Association of American Medical Colleges, and Federation of State Medical Boards of the United States.

The following principles were emphasized by the Council on Medical Education and Hospitals in its report recommending AMA participation in the program:

> "1. Although the responsibility to share educational opportunities in medicine is recognized, the primary concern must be for the health care of the American public. Thus, before assuming responsibility for the care of patients as interns or residents, all graduates of foreign medical schools (immigrants, exchange students, and American graduates of foreign medical schools) should give evidence, as nearly as can be measured, of having reached a level of educational attainment comparable to that of students in American schools at the time of graduation.
>
> "2. The primary objective of this Committee is to devise an effective mechanism for measuring educational attainment in the absence of intimate and continuing knowledge of the educational background of foreign-trained physicians. This mechanism should provide hospitals with pertinent information regarding the medical qualifications of foreign-trained physicians seeking positions as interns or residents. It should not interfere with the hospital's privilege of making its own selection among qualified physicians, nor should it serve as a substitute for or interfere with the normal licensure procedures of the various state boards.
>
> "3. It is not intended that this mechanism be applicable to those foreign medical school graduates in this country as temporary students participating in programs of medical and related studies in recognized universities, medical schools and postgraduate schools, who by the very nature of their study are not involved in the responsibility of patient care."

The proposed plan calls for establishment of a central administrative organization to evaluate the medical credentials of foreign-trained physicians desiring to serve as interns or residents in American hospitals. Basic requirements would include satisfactory evidence of at least 18 years of total formal education, including a minimum of 32 months in medicine exclusive of any time which in this country would be considered as premedical study or internship. Applicants with satisfactory credentials then would take a screening examination to determine their medical knowledge and their facility with the English language. Successful applicants would be certified to hospitals and other interested organizations, with the approval of the foreign-trained physician concerned.

Private Practice by Faculty Members

For more than a year, a special committee of the Council on Medical Service had reviewed problems related to private practice by members of the faculties of medical schools. In a special report to the House of Delegates, the Council presented background data of their investigation, came to some conclusions about policies, and recommended that final action on the whole report should be deferred until the December meeting of the House of Delegates. After a confused and sometimes stormy debate of the report, the House chose not to defer action. Accordingly, the following statement was declared to be the policy of the American Medical Association:

"... Funds received from the private practice of medicine by the salaried members of the clinical faculty of the medical school or hospital should not accrue to the general budget of the institution and ... the initial disposition of fees for medical service from paying patients should be under the direct control of the doctor or doctors rendering the service."

Apparently recognizing that the enunciation of this policy is only a first step toward settling differences of opinion between medical schools and organized medicine, the Council report calls for liaison activities between schools and medical societies at all levels—county, state and national. It seems urgent that such liaison should be effective if a schism between teachers and practitioners is to be prevented.

Federal Aid to Medical Schools

One of the most controversial subjects of debate on the floor of the House was a resolution expressing strong opposition to S.1323, a bill in Congress providing for one-time, matching grants to medical schools for construction purposes. The Association in recent years has been supporting such legislation in principle, with certain reservations concerning details of some provisions. The House reaffirmed that policy by approving a reference committee statement which said:

"We appreciate the intent with which this resolution was introduced, but at the same time we feel that there are many economic and geographical factors involved, which might not make this resolution practical on a national level. Inasmuch as no evidence was offered to this Committee to justify a change in the previously declared policy of the House of Delegates, your Committee recommends that this resolution be not adopted."

Miscellaneous Actions

Among other actions on a wide variety of subjects, the House of Delegates also approved a Board of Trustees' statement on Social Security that included the following:

"It is imperative that we distinguish clearly between this problem of coverage of physicians and the far more dangerous disability proposal. The fact should be recognized that the shape of medical practice in the future is not directly related to the inclusion or exclusion of physicians under OASI. It is a matter of vital importance to us as individuals, but it cannot, per se, stimulate further Government intrusion into medical care. On the other hand, the disability amendment obviously brings the Social Security Administration closer to the regulation of medical care than ever before."

Adopted a resolution amending the By-laws to provide that the Vice President, Treasurer, Speaker, and Vice Speaker of the House of Delegates shall be ex officio members of the Board of Trustees with all the rights and duties of the Board but without the right to vote.

Increased membership of the Council on Medical Service from 6 to 9 active or service members and eliminated all ex officio members except the immediate Past President.

Directed the Council on Medical Service and the Council on Industrial Health to reconsider the "Guiding Principles for Evaluating Management and Union Health Centers" through their joint Committee on Medical Care for Industrial Workers and to so revise the guides that they conform completely with the Principles of Medical Ethics.

Authorized the Committee on Federal Medical Services to make a continuing study of all aspects of VA medical activities under the basic policy established in June, 1953, and suggested reconsideration of the temporary exceptions made at that time with respect to neuropsychiatric and tuberculous disorders.

Recommended that the Board of Trustees select New York City as the place of the 1961 annual meeting.

Listened proudly to superb reports by Student AMA representatives Guild (President, Northwestern) and McQuillen (Vice President, Georgetown).

Approved a resolution that calls for prompt development of medical society plans for provision of medical care to dependents of armed forces personnel under terms of P.L. 569.

Accepted for consideration a revision of Principles of Medical Ethics of the American Medical Association. That revision, to be acted on next December, is as follows:

PRINCIPLES OF MEDICAL ETHICS OF THE AMERICAN MEDICAL ASSOCIATION

Preamble

These principles are intended to serve physicians, individually or collectively, as a guide to ethical conduct. They are not laws; rather, they are standards by which a physician may determine the propriety of his own conduct. They are intended to aid physicians in their relationships with patients, with colleagues, with members of allied professions and with the public, to maintain under God, as they have through the ages, the highest standards.

Section 1. The prime objective of the medical profession is to render service to humanity with full respect for both the dignity of man and the rights of patients. Physicians must merit the confidence of those entrusted to their care, rendering to each a full measure of service and devotion.

Section 2. Physicians should strive to improve medical knowledge and skill, and should make available the benefits of their professional attainments.

Section 3. A physician should not base his practice on an exclusive dogma or a sectarian system, nor should he associate voluntarily with those who indulge in such practices.

Section 4. The medical profession must be safeguarded against members deficient in moral character and professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5. Except in emergencies, a physician may choose whom he will serve. Having undertaken the care of a patient, the physician may not neglect him. Unless he has been discharged, he may discontinue his services only after having given adequate notice. He should not solicit patients.

Section 6. A physician should not dispose of his services under terms or conditions which will interfere with or impair the free and complete exercise of his independent medical judgment and skill or cause deterioration of the quality of medical care.

Section 7. In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him to his patient.

Section 8. A physician should seek consultation in doubtful or difficult cases, upon request or when it appears that the quality of medical service may be enhanced thereby.

Section 9. Confidences entrusted to physicians or deficiencies observed in the disposition or character of patients, during the course of medical attendance, should not be revealed except as required by law or unless it becomes necessary in order to protect the health and welfare of the individual or the community.

Section 10. The responsibilities of the physician extend not only to the individual but also to society and demand his coöperation and participation in activities which have as their objective the improvement of the health and welfare of the individual and the community.

Respectfully submitted,
HUGH H. HUSSEY, M.D., *Delegate*
RAYMOND T. HOLDEN, M.D., *Delegate*
THEODORE WIPRUD, *Secretary*

DISTRICT DOCTORS PARTICIPATING IN NATIONWIDE STUDY

The National Disease and Therapeutic Index, a medical statistical research program of exceptional value, has completed its first 3 months of operation with the promise of interesting and useful results. Designed to provide information for continuous study of the nature, scope and frequency of occurrence of nonfatal disease, injury, and other conditions as seen by the doctor in private practice in the United States, the program involves the compilation of statistical data showing why patients see doctors and what types of treatment they received.

Nearly 900 doctors, located in 27 statistically-selected, representative areas throughout the country, have agreed to participate in this important project which has aroused the professional interest of medical men, and particularly of medical educators and those involved in both basic and applied research.

At the present time, more than 25 doctors in Washington and vicinity are coöperating in the NDTI program, and enlistment of additional panel members is proceeding rapidly. A recent analysis showed the following representation by types of practice in this area: 12 general practitioners, 6 internists, 4 surgeons, 2 obstetrician-gynecologists, and 1 gynecologist.

Established to meet the long-recognized need for statistics on morbidity as contrasted with those on mortality, the program was explored thoroughly with top-level members of the American Medical Association staff; representatives of many state, county and local medical societies; a number of medical educators; and others in the medical profession and allied fields before being put into operation. The nonexistence of reliable data in this area of research and the potential value of such data in general and specialized medical practice, research and education have been recognized consistently by those consulted.

To accomplish the objectives of the program, a panel of 864 randomly selected doctors is being established, consisting of approximately 32 men in each statistically selected sample area. The design of the distribution provides for the inclusion of both urban and rural doctors, and proper proportional representation of general practice and the various specialties.

Each coöperating doctor will report 4 times per year, giving the age, sex, diagnosis or diagnoses, and therapeutics administered to or prescribed for each patient seen during the course of a 48-hour period once each quarter. In a pilot study conducted with 50 doctors in the Philadelphia area in September 1955, it was determined that the program was completely feasible, and that the required case record for each patient could be completed in less than one minute. Of particular importance to the members of the medical profession and the public is the fact that the names of patients are never involved and the names of reporting doctors are not identified with case records. The identities of doctors participating are never divulged by the NDTI in reports or other data submitted to the sponsoring organizations, the AMA, or any other individual or organization.

To serve as liaison with the reporting doctors, and to supervise the operation of the program in each area, 27 coördinators have been appointed. Their function is to assist in enlistment work and scheduling of reporting dates, and to do preliminary coding of diagnoses according to the International Statistical Classification of Disease, Injuries and Causes of Death.* The coördinators are drawn from among trained medical personnel in each sample area.

The full research facilities of Taylor, Harkins and Lea, Inc., of Philadelphia, have been utilized in the organization, development and operation of the NDTI, and the program has the support of leading ethical pharmaceutical houses. Continuous liaison has been established with the Bureau of Economic Research and the *Journal of the AMA* to assure that that organization will be prepared to receive and utilize such data as may, after careful analysis and evaluation, be of general use. Other organized medical groups and the Nation's medical schools eventually should benefit from such useful data as may be developed from time to time as a result of the program.

In summary, the data to be gathered by means of the National Disease and Therapeutic Index should aid: medical educators in planning new and revising current curricula; medical investigators in determining the directions to be taken and the goals to be

(Continued on page 472)

---

* Sixth revision of the International Lists of Diseases and Causes of Death, adopted 1948, published by the World Health Organization, Geneva, Switzerland, 1949.

ANNUAL REPORT OF THE PHYSICIANS' SERVICES COMMITTEE OF MEDICAL SERVICE*

There may be some Participating Physicians who are not acquainted with the composition and functions of the Physicians' Services Committee and I shall therefore review them briefly. This Committee is composed of 10 physicians, appointed by the Board of Trustees, to most nearly represent all the surgical specialties, and also medicine and pathology. It is not the duty of each member, however, to represent the members of his specialty, but to represent all members of the Plan in Committee deliberations by his specialized knowledge. Its functions are principally those of mediation between the Medical Service's Plan, the subscriber, and the Participating Physician in all those cases not routinely handled through administrative channels. These individual cases are brought to the Committee because of questions of eligibility of the subscriber for benefits under the Plan; questions of fees in multiple or complex surgery or where no fee is set by the fee schedule; questions of fees involving more than one surgeon; questions of complications, laboratory fees, and many others, including some which have had legal importance.

We have had 9 meetings so far this year, all well attended and each averaging 3 hours in time. Also present at these meetings were Dr. A. Clagett Gray, Medical Advisor to the Plan; Mr. George McGovern, Manager of Medical Service; and Mr. A. B. Carpenter, in charge of the Claims Department. They present the cases and furnish all necessary data for our guidance but have no vote in the decisions made.

We reviewed a total of 257 cases. During this period about 136,000 cases, which represented a payment to Participating Physicians of almost 5 million dollars, were processed routinely. Interesting to note is the fact that there has been no increase in the number of cases brought to the Committee since the first year of operation of the Plan when only 35,000 cases were processed. This certainly indicates that the Plan functions as a smoothly running organization, dealing equitably with Participating Physicians and subscribers under the fee schedule and rules which have been set up for its guidance. Of the 257 cases which we reviewed, 41 involved questions of eligibility and 216 involved questions of fees.

I think you would be interested in some of the problems which have confronted the Committee because many of you have felt the impact of its decisions, which were not always to your liking. Those which have been encountered most frequently consist of cases relating to complications, plastic surgery, multiple procedures, and laboratory fees.

Regarding complications, this Committee has followed precedents established by previous Committee and Board decisions. In addition, it is the philosophy of the Committee to interpret the fee schedule as set up by individual surgical groups in their own specialized fields, not as fees representing averages of those charged in the community, but as fair fees representing a compromise between what should be paid for highly difficult or prolonged cases and those which are relatively easy or short. We have kept in mind, of course, that no fee is fair in this schedule if made for a patient much above the income level, or on the recommendation of an extremely grateful one. There have been occasional letters from subscribers berating the Committee for the small fees allowed their favorite surgeon even though these had been set by the fee schedule itself. For the Committee to have allowed extra payment for every difficult or prolonged case would have been incongruous unless a smaller payment had been made for all of the so-called easy cases. However, be assured that your Committee has always been sympathetic in those cases deemed to work hardship and has allowed an additional fee. This has always been true when the complication had appeared late, or in cases where the natural progress of the disease, such as cancer, had resulted in repeated surgical problems and care. Your Committee was so aware of this problem that early last fall it requested a clarification by the Board of Trustees, and I shall read an excerpt from the minutes of the October 4, 1955 meeting of the board:

> "At this point, consideration was given to a recommendation of the Physicians' Services Committee that the policy prevailing with regard to payment for complications should be reviewed. It was pointed out that the Physicians' Services Committee does not usually provide additional benefits for complications resulting from previous surgery, inasmuch as the Committee felt that the practice in this area is to consider that a contract to pay

---

* Presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, April 25, 1956.

for a surgical procedure would include payment for complications resulting from the same surgery. It was pointed out that an exception to this policy sometimes is made when a long time interval has intervened and it is apparent that the complication is a result of the disease itself rather than the management of the disease. Furthermore, some members of the Physicians' Services Committee feel that an additional charge for complications is reasonable and just under most circumstances, and that a review of this problem would be helpful to the Committee in its consideration of future cases. After due deliberation, it was agreed that the Committee's approach to the problem in the past has been reasonable, and that the Committee should continue to exercise its judgment in determining which complications should be covered by payment of the original surgery."

This Committee is happy to report that the plastic surgeons have recently been able to work out a basic schedule of fees, which did not exist previously. This is now in the hands of the Fee Committee. It should be of great help to this Committee in the future because cases involving plastic procedures have been the most time-consuming of all those brought to the Committee due to their complex nature.

In cases of multiple procedures, careful study and discussion were usually necessary to reach a fair and proper decision. It is in this field that our Plan shows its superiority to the commercial insurance companies with straight indemnity payments. Where a case required repeated surgery, or where the multiplicity of injuries, burns, or surgical problems demanded extended treatment, it was possible through our Plan for reasonably adequate compensation to be made, oftentimes exceeding considerably the ceiling of $250 allowed for any one operation. This would be impossible under an indemnity plan.

The addition of a pathologist to the Committee last year has helped to solve the problem presented by laboratory charges, which, in some cases, seemed to be out of proportion to those of the surgeon and the anesthetist.

Using the formula for multiple procedures and disallowing all charges for tests relating to the medical aspects of the case, it has been possible to reduce this financial drain on the Plan materially. If the surgery was diagnostic only, the laboratory fee necessary for the performance of the surgery and for the diagnosis of tissue was all that was allowed. An example of this was a case of hepatic cirrhosis in which a needle biopsy was made but in which a bill presented for laboratory fees relating only to the medical aspects of the case amounted to several hundred dollars.

When the Board decided to pay dermatologists for the removal of skin lesions by electrodesiccation, a serious situation was in the making, since some cases were presented where literally hundreds of lesions were removed in the same individual. Obviously, use of the fee schedule would have created a serious financial expense. Therefore the Board of Trustees arranged a liaison group of three dermatologists who work with each member of their group presenting claims. Using the criteria of pathologic and clinical necessity rather than cosmetic need, these physicians, with unbounded patience and generosity of time, reviewed all claims, and then appeared at our meetings with explanations and recommendations, which in all cases seemed so fair that your Committee almost invariably concurred. Drs. Harry F. Anderson, Frank J. Eichenlaub, and Raymond Stoller well deserve this mention of our gratitude.

As a result of my experience, I believe, and my belief has been confirmed by the opinion of others, that there has been in the past few years an unconscious liberalization by the Committee in its decisions on fees paid. This is undoubtedly a reflection of the more secure financial position of the Plan. The Committee has been aware of inequities in the fee schedule. In certain instances it has made recommendations to the Board for the purpose of correcting some of these. An example of this was a recent increase made by the Fee Committee for certain colon surgery, following such a recommendation by our Committee. Amputation of a finger requiring subsequent graft was another. The Committee voted to allow an anesthetist a fee for constant attendance on a case although no anesthesia was given; to another a fee was allowed for caudal anesthesia administered for the relief of pain in terminal stage carcinoma. In another case an increased fee was allowed for the continuous attention of an anesthetist for an 18-hour period.

The Committee made a recommendation to the Board of Trustees that payments be made to physicians rendering first aid in addition to that made to the surgeon who later performed the necessary surgery.

In several cases where a surgeon or an anesthetist felt inadequately compensated under the fee schedule it was recommended to him that he take this up with the fee committee of his specialty group for possible change of the fee schedule.

In cases where new operative procedures had been developed, the Committee usually recommended the fee allowed by the schedule for that type of operation whether or not the surgery was more complicated or less complicated than the older established procedure. This should certainly stimulate the performance of the less complicated procedures.

The only claim for a sterilization operation allowed by the Committee last year was in the case of an albino couple with familial deafness. All other claims had been denied for these operations on the basis that no medical condition existed to warrant the procedure. A few subscribers wrote letters to this Committee expressing profound dissatisfaction, coupled with implied threats of legal action. It seemed to be evident that sooner or later one of our physicians might be sued on the grounds that he had performed surgery which our Committee had in effect called medically unjustified, and the Board of Trustees therefore recently voted to include these operations in subscriber contracts.

Some thought could be given to written statements to your Committee by member physicians concerning the eligibility of patients, which the patient has or could get copies of, and which unequivocally state that the patient's condition was not preëxisting. If your Committee after due consideration disallowed such a claim, believing the condition was preëxisting, the physician might conceivably find himself the victim of a malpractice suit based on the patient's assumption that operation had been delayed because the condition had been missed by some act of negligence. However, your Committee has attempted to be alert to prevent the development of such compromising situations.

A number of borderline cases regarding eligibility which involved date of onset of a condition in relation to the effective contract date have been considered and benefit of doubt always given to the subscriber when possible. Many subscribers and some physicians apparently do not realize that honest ignorance of the existence of a condition at the time the contract was written does not alter the fact that the condition did in truth preëxist. A simple example of this would be abnormal uterine bleeding which antedates the contract date, followed within the 10-month waiting period by a hysterectomy for fibroids which the patient had no knowledge of. But here the weight of medical knowledge would confirm the belief of preëxistence.

I wish to stress the importance of adequate description of procedures performed when submitting Physicians' Services Reports, and detailed histories and operative findings when requested. Delayed payments, and telephone calls, which certainly must be annoying to a busy physician, could thereby be eliminated. In any case where the physician feels dissatisfaction concerning fees, letters or telephone calls are welcomed. The Committee has welcomed also photographs and detailed description of all procedures unusual in any way and this invitation was published in an issue of the *Bulletin*.

In three years' service on this Committee, I have never seen a controversial case discussed or a decision made without full participation by all members present. Unanimity of thought is sought for, and individual opinions are carefully weighed. Knowledgeable argument by one member has often reversed a decision previously concurred in by a majority. This Committee at all times has attempted to disregard emotional factors in its analysis of its problems. Furthermore, it has not been the function of this Committee to discuss the indications for surgery, or the type of surgery or skill in performance. The statement of the Participating Physician regarding the above has always been accepted as fact. The identity of the doctor whose case is being considered is not part of the discussion and is rarely known to members of the Committee. No member of the Committee makes his own specialty the pedestal from which he looks down on the problems of others.

The Committee has always been aware of its fiduciary responsibilities in the part it plays in the division of monies not its own. At the same time it has recognized its obligations to protect the financial security of Medical Service and of the subscribers.

I should like to pay tribute here to individual members of my Committee for their coöperation and long hours of hard work; also, to the invaluable help and guidance given by Dr. Gray, Mr. McGovern, and Mr. Carpenter. Working with all of them has been a most satisfying experience.

In conclusion, I wish to comment on the recent Annual Conference of Blue Cross–Blue Shield Plans, which it was my privilege to attend.

No one sitting in on the several days of discussion and debate could be otherwise than tremendously impressed by the high purpose and sincere ideals of the attending physicians. He would be impressed by the emphasis these men placed on their own community health problems, keeping in mind, however, the problems of their own doctors who are coöperating with the Plans. He might be surprised as well as impressed to learn of the great social pressures by employers, citizens' groups, as well as governmental agencies, behind voluntary health insurance programs. He would learn also of the forces still at work, by some unions, state insurance commissioners, politicians, and others striving to remove the control of prepayment programs from the medical profession, or to substitute compulsory Government health insurance. For us to ignore these forces could very well result in a loss of the control which we now exercise in the interests of the profession and the public alike. I believe that he would also appreciate how well and with what diligence and labor our own Board of Trustees has done its work, although sometimes its relations with our own group have not been the best.

Some dissatisfaction must invariably occur at times because of a natural jealous protection by the Participating Physician of his rights and prerogatives. This is normal and healthy. It must never occur, however, as a result of lack of information, misinformation or distrust. Free discussion and exchange of ideas have been and must be always the simple remedy for this. Therefore I should like to recommend that a page or two be set aside in the MEDICAL ANNALS in every issue for this purpose. This could keep the Participating Physician abreast of all new developments and the various problems confronting the Board of Trustees or this Committee. It could serve also as an open forum for the free expression of views by all Participating Physicians. It could help him feel that he still has a hand on the brake of this great machinery for good that he himself has created.

Medical Service, as all other Blue Shield Plans, must continue to grow and give extended coverage and increased benefits. It cannot stand still and it must not fail. By seeking to develop a better understanding among us, our mutual aim will be accomplished, of making successful in our community what has been described as the greatest voluntary social advance ever produced in this country.

EDWARD W. NICKLAS, M.D., *Chairman*

WOMAN'S AUXILIARY NOTES

CHICAGO, ILLINOIS, June 14: The District of Columbia delegates to the 33rd Annual Convention of the Woman's Auxiliary to the AMA felt right at home in the record-breaking 97° weather which greeted us in Chicago. Although temperatures sizzled, the energy of the 406 delegates representing about 70,000 members remained unwilted as they conducted Auxiliary business and participated in the numerous social functions. Nearly 9,000 doctors braved what some estimated to be a sweltering 105° heat on the Navy Pier to visit the scientific and technical exhibits. Meanwhile Chicago, like Washington, D. C., dreams of constructing its own civic center with a huge, modern auditorium suitable for conventions as large as the AMA.

For the first time the National Auxiliary made plans to entertain the doctors' children who accompanied parents to the convention. Plans included a visit to the zoo, a picnic, and a tour of the Museum of Science and Industry.

Outgoing President Mrs. Mason G. Lawson called upon Auxiliary members and all doctors' wives to maintain a continued interest in community affairs, with special emphasis on all medical and health projects. She urged continued support of the Crusade For Freedom, the Get Out and Vote Campaign, Civil Defense, the American Medical Educational Foundation, and Mental Health Programs. Dr. Elmer Hess, retiring President of the AMA, told us he feels "doctors' wives can be one of the best advertisements for the medical profession" and he also urged participation in community and civic affairs.

Listening to the reports of the Auxiliaries of the 48 states, Alaska, and Hawaii makes one realize the enormity and scope of the work of the National Auxiliary. These reports demonstrate how each State Auxiliary forms a cog in the machinery of the national organization, carrying out its main objectives as well as participating in projects and activities on the local level. The representatives from far-away Alaska and Hawaii received a praiseworthy round of applause. Worthy of mention is the fact that the Medical Society of Hawaii, founded in 1856, is celebrating its Centennial Anniversary.

The National Auxiliary presented a check of $106,000.00 to the American Medical Educational Foundation. This amount represents sums from all the State Auxiliaries and includes collections from the Eighty Dimes Campaign of this past spring. The Woman's Auxiliary to the Chicago Medical Society received a special award for making the largest contribution of $3,000.00.

At a special *Today's Health* Workshop plans were outlined for expanding future activity toward promoting this popular health magazine published by the AMA for the lay public. The aim will be to have every doctor subscribe to this publication for his reception room, and subscriptions will also be solicited from the general public. There were round table discussions on Civil Defense, Mental Health, and Nurse Recruitment, all of which are among the most important endeavors of the National Auxiliary.

Mrs. Leonard Houda, Convention Chairman, presided at the Annual Dinner. At this well attended function, the guest speaker was Miss Ilka Chase, who, in private life, is the wife of Dr. Norton Brown, of New York City. Miss Chase has had a brilliant career as actress, writer, and lecturer. She has a brilliant wit and proved to be a delightful speaker.

On Friday, June 15, there will be a Postconvention Conference of the National Officers, Directors, Committee Chairmen, and State Presidents and Presidents-elect with Mrs. Robert Flanders, the new President, presiding. At this Conference the 1956–1957 Program will be presented and a discussion of plans for the 1956 Fall Conference will be on the agenda.

It would be impossible for any one person to attend all the meetings, programs, panels and workshops of this national meeting. Those I was able to attend brought to mind the slogan of a national magazine—"Never Underestimate the Power of a Woman"! Auxiliary ideals and goals are high, but because of the sincere and zealous effort applied I am convinced none are impossible.

Teletype Message, June 15: Mrs. Edgar E. Quayle elected Fourth Vice President National Auxiliary. Mrs. Lawrence A. Rapee appointed Chairman, Eastern Region of *Bulletin* circulation.

MRS. I. PHILLIPS FROHMAN
Publicity Chairman

MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, June 25, 1956, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

William D. Byrne, Georgetown University Hospital
Wallace Lane Chan, 1673 Roberts Lane, Falls Church, Va.
Charles David Cooper, 1730 Eye Street, N.W.
Pasquale De Felice, 12410 Denley Road, Silver Spring, Md.
Thomas A. Gilday, 4491 MacArthur Blvd., N.W.
Francis C. Kirchner, 7700 Colesville Road, W. Hyattsville, Md.
Steven Oristian, 3120 Winnett Road, Chevy Chase, Md.
John R. Portaria, 1201 Ingraham Street, N.W.
Constance Ann Quarles, 1815 First Street, N.W.

Associate Members

Roman Folwarkiw, Georgetown University Hospital
Magdeleno L. Jardeleza, 2803 Ontario Road, N.W.
James H. Nelson, 1552 41st Street, S.E.
John A. Turner, D.D.S., 1218 Girard Street, N.W.

Resident-Intern Members

Niroslava Marie Vozenilek, 3005 S. Buchanan Street, Arlington, Va.
Zavis Joseph Vozenilek, 3005 S. Buchanan Street, Arlington, Va.

On the Lighter Side

For the golfing enthusiast, the annual Pfizer Physicians' Golf Tournament is a MUST on every medical man's calendar. There are trophies and prizes to be won and a gustatory banquet with all the trimmings to end the day's doings. But the real interest lies in the opportunity the tournament offers to the average golfer to enjoy a day on the links with friends and medical colleagues.

The recent tournament held at the Kenwood Country Club for the members of the D. C. Medical Society proved to be such an opportunity for 114 competing golfers.

Dr. William Evans, who retired the Pfizer Trophy in 1955, was not quite as sharp as usual with his 83, and was nosed out by Dr. John Everett, who shot a sharp low gross of 72, thereby winning the large Trophy for 1956.

Drs. Richard Meyer, James Fitzgerald, Edward Quayle and Stephen Oristian tied for second place low gross honors with a creditable 78.

Dr. Everett also came in first with a low net of 69, followed by Drs. Paul Zehfuss and Benjamin Dean with a second low net of 71. The high score of the day went to Dr. Thomas Cook, who whacked a hefty 129 for the 18 holes. Drs. Sol Katzman and E. E. Cornelsen had the honor of having the most strokes per hole—11.

Consistency pays off sometimes and Dr. William Tenenblatt won a prize for the most "5s" per hole. He managed to have 14 holes at 5 strokes per hole. Dr. Louis Ross also won a prize for having 11 holes at 6 strokes per hole.

The Early Bird prize was presented to Drs. Duane Richtmeyer, Francis Crilley, and Harold Heiges for teeing off at 7 a.m., which is practically the middle of the night for some golfers.

There were other prizes awarded to attending golfers for achievements not associated with skill in driving or putting or blasting out of the sand traps. Dr. Allen Lloyd was awarded top honors for appearing on the links in the snappiest golfing-dress combination; and Drs. James Helfgott and George Selby demonstrated their ability to putt off-center golf balls into the cup. This latter exhibition created a great deal of diversified humor and comment which everyone enjoyed. Dr. Selby was able to putt his ball into the cup first, thereby winning a prize.

Following the dinner the card room was utilized by those golfers who were too tired to stand up at the bar.

Among the honored guests for the occasion were Dr. W. Ross Morris, President of the D. C. Medical Society; Mr. Theodore Wiprud, Secretary, and Mr. Lawrence Zupan, Assistant Secretary, of the Medical Society.

CHUCKLE NOTES: For 15 miles the frustrated motorist had tried to pass the truck, and every effort had been stymied by the truck driver, who knew he was behind him. Finally, at a stoplight, the motorist pulled up beside the truck. "Well?" growled the truck driver. "Oh, nothing important," said the motorist. "I know what you are; I just wanted to see what one looks like."

* * * * *

Jane: "Have you seen Ruth's new evening gown?"
Jill: "No, what does it look like?"
Jane: "Well, in most places it looks quite a lot like Ruth."

* * * * *

Statistics are like a Bikini bathing suit. What they reveal is interesting, but what they conceal is vital. . . . While a woman's styles may change, fortunately for the menfolk her designs remain the same. . . . Don't smoke in bed—the ashes that are swept up in the morning may be your own.

J. EARL KADAN, M.D.

WORKMEN'S COMPENSATION LAWS*

JAMES R. CROOK, JR.

Attorney, The Chesapeake and Potomac Telephone Company

The subject of Workmen's Compensation is too extensive to permit a full treatment here, but I thought this talk might well be divided into 3 parts: (1) a history of Workmen's Compensation laws, (2) a typical Workmen's Compensation Act in broad outline, and (3) some observations about Workmen's Compensation Acts that might be of particular interest to the medical profession.

HISTORY OF WORKMEN'S COMPENSATION LAWS

Before the enactment of Workmen's Compensation statutes, the common law controlled the liability of employers for injuries suffered by their employees. The common law is that body of principles and rules of action relating to the government and security of persons and property, which derived their authority solely from usages and customs of immemorial antiquity, or from the judgment and declaration of the courts recognizing, affirming and enforcing such usages and customs, particularly the ancient unwritten law of England.

Under the common law the duty of an employer to protect his servants was limited to certain more or less specific obligations, beyond which the servant was expected to assume all the risks of his employment. The master was required to use reasonable care to: (a) provide a safe place to work, (b) provide safe appliances and equipment, (c) warn and instruct the servant as to dangers of which he might be expected to remain in ignorance, (d) provide a sufficient number of suitable and competent fellow servants, and (e) make reasonable rules for the conduct of the work.

The relation of master and servant is contractual in nature, but as in the case of many other types of contracts, once the relation was established, the common law attached to it certain obligations on the part of the master for the protection of the servant, the breach of which gave rise to an action in tort. A tort is a private or civil wrong or injury independent of contract, and its most general application is in the field of negligence. We see, therefore, that before Workmen's Compensation statutes were enacted an employer's liability to his servant for injury normally lay in the field of some negligent act or omission of the employer.

Not only did liability of the employer commonly rest on his negligence, but even if he were negligent there were certain defenses available to him in an action by his servant or employee. These defenses were (a) contributory negligence on the part of the servant, (b) assumption of risk by remaining in the employment with knowledge of the employer's negligence and appreciation of the danger, and (c) the fellow-servant rule by which the employer was not liable for the negligence of other servants whose work was so associated with that of the plaintiff as to involve a special risk to him if they were negligent. It is apparent, therefore, that an injured employee was in many cases in a worse position than a total stranger, because, although a total stranger might be barred from recovery by contributory negligence and by some aspects of assumption of risk, at least he was not barred by the negligent act of one of the employer's servants, and, indeed, such a negligent act or omission was often the foundation of the stranger's right of action against the master or employer. The result of these defenses was largely to preclude employees from recovering for industrial injuries. To counteract this situation, legislation was passed which might be classified generally as employers' liability statutes. These statutes accepted the basic common law concept that the employer was liable to the employee only for the negligence or fault of himself or one acting for him. They did not aspire to create any new principle of liability applicable to the employment relation as such. The most they set out to accomplish was the restoration of the employee to a position no worse than that of a stranger injured by the negligence of an employer or his servants.

The first of such acts was the Georgia Act of 1855, which abrogated the fellow-servant defense for railway companies only. By the time compensation legislation began to take over the field in 1911, 25 states had some kind of employers' liability statutes. The Federal Employers' Liability Act of 1908, applicable to railroads engaged in interstate or foreign commerce as common carriers, may be regarded as the high point of this phase in the development of employees' protection. It provided that contributory negligence by the injured employee should only mitigate damages and that neither this defense nor assumption of risk should apply in the case of a safety statute violation. It also made the employer liable for the negligence of all of its officers, agents and employees, and for defects and insufficiency due to negligence in tracks, equipment, engines, and cars resulting in injuries to employees. This statute is still in effect.

---

* Read before the Conference of Examining Physicians of The Chesapeake and Potomac Telephone Companies, held in Washington, D. C., October 6 and 7, 1955.

The origins of true Workmen's Compensation began in Prussia in 1838, when a law was enacted making railroads liable to their employees for accidents from all causes except Act of God and negligence of the injured employee. In 1884, Germany adopted the first modern compensation system, 13 years before England, 25 years before the first American jurisdiction, and 65 years before the last American state.

By the end of the nineteenth century the incidence of increasing industrial injuries and decreasing remedies for injured employees had produced in the United States a situation ripe for radical change, and the passage of the first British compensation act in 1897 gave added stimulus in this direction. As to actual enactment the story began modestly with a rather narrow coöperative accident fund for miners passed by Maryland in 1902, which quietly expired when held unconstitutional by a lower court. In 1910 the first New York act was passed with compulsory "hazardous employment" coverage only. It was held unconstitutional in 1911 by the Court of Appeals of New York on the ground that the imposition of liability without fault upon the employer was a taking of property without due process of law under the state and Federal constitutions. The fate of this early law in the courts still has repercussions in existing statutes. In some states the coverage of the acts was made elective, and in others only "hazardous" or "extrahazardous" employments were covered in the hope that these qualifications would protect their constitutionality. The Maryland statute still provides for coverage of "extrahazardous" activities only, but in practice many employments have been regarded as extrahazardous within the meaning of the Act that ordinarily would be considered to entail a minimal risk of bodily harm. In 1917 the Supreme Court of the United States held Workmen's Compensation statutes to be constitutional and thus relieved doubts as to their validity. Nevertheless, a number of state statutes are still in existence which are colored by these earlier fears of unconstitutionality.

By 1920 all but 8 states had adopted compensation acts, and in 1949 the last state, Mississippi, came under the system. The original Acts usually covered only accidental injury, and there has been much litigation in ensuing years as to whether or not particular cases of disability could be considered to be due to an "injury," or "accidental," if their onset was gradual and insidious rather than sudden and evident. Much of the contention surrounding this point has been resolved during recent years by statutory coverage of hernia and occupational diseases. Forty-six states now have laws which by one method or another compensate for all or specified occupational diseases.

Typical Workmen's Compensation Act

A typical compensation act is one which covers all employees except domestic, agricultural or casual workers and those whose employers employ less than 4 or 5 persons. The coverage is extended to all those employees injured or who suffer an occupational disease, and to designated beneficiaries if they are killed, where the injuries or diseases arise out of and in the course of employment. There is a wide variance among the states in the amount of benefits payable under the Acts, but there are 4 fundamental types of compensation or payments which are almost universally recognized: (1) for temporary total disability, (2) for permanent partial disability, (3) for permanent total disability or death, and (4) for medical treatment. Temporary total disability is disability resulting at the outset from injury or occupational disease during which period the employee is recovering. While he is unable to work, the Compensation Acts provide for monetary benefits. In the District of Columbia the compensation paid during temporary total disability is two-thirds of the average weekly wage, or a maximum weekly payment of $35, whichever is less. There is a minimum of $12 weekly and an over-all limit of $11,000. In Maryland, it is two-thirds of the average weekly wage, with a maximum payment of $35 per week, a minimum of $15 per week, and an amount limit of $5,000. In Virginia it is 60 per cent of the average weekly wage, with a maximum payment of $27, a minimum of $6, and an amount limit of $10,800.*

Assuming the ordinary case, after maximum recovery has been attained by the employee and he has returned to work, there ordinarily is a provision in the Compensation Acts for an award to cover permanent partial disability. This payment is intended to make the employee whole in a financial way for any residual physical impairment affecting his industrial employability or earning capacity. In most statutes there is a so-called schedule of injuries. This schedule enumerates certain members of the body the loss, or loss of use, of which is compensable by a payment arrived at by multiplying a specified number of weeks by the average weekly wage of the injured employee, within certain maximum and minimum limits. There are, however, certain disabilities which are not scheduled, such as disfigurement and back injuries, and in these cases particularly there are some rather debatable awards handed down. This is a topic not free from controversy, as there are authorities in the field who maintain that the idea of compensation for permanent partial disability is a carry-over from the common law system of paying for a wrong committed. They contend that the true significance of Workmen's Compensation is not to settle a personal contest between the employer and the employee for an alleged private wrong committed, but rather to maintain a continuity of income to an injured worker until such time as he is able to return to employment. It is arguable, therefore, whether a lump sum cash award for residual physical impairment is appropriate in the normal case, where in fact the employee returns to his job with undiminished wages and without any practical or measurable loss of earning capacity.

I might say at this point that the evolution of Workmen's Compensation Acts and judicial decisions interpreting them have made the doctor rather than the lawyer the principal figure in the administration of the Workmen's Compensation system. It is true, of course, that certain legal questions do arise under the various Acts concerning coverage, causal relations, time for filing claims, etc. With the passage of time, however, many of these questions have been resolved by the courts and administrative practice, and the only real issue in most claims is the nature and extent of disability, which is a medical question. One of the purposes of Workmen's Compensation Acts was to relieve the courts of litigation involving injured workmen, and this has certainly been successful since only a fraction of claims are litigated, the balance being handled administratively by Workmen's Compensation boards and commissions. The medical profession, therefore, bears a large responsibility in the field of workmen's compensation if employees and employers alike are to be treated justly and fairly.

Medicine is not an exact science. Disability evaluation calls for the most precise end-result studies and prognosis. In practice the medical evidence presented to the administrative board or commission in Workmen's Compensation cases determines the benefits awarded. Injustices and inequities are bound to arise if sound, objective evaluations by competent doctors are not available.

In connection with the subject of permanent disabilities, there is a movement on foot for the rehabilitation of the industrially disabled. Alaska, Hawaii, 17 states, the Federal Acts† and all Canadian provinces have made specific provision either by way of establishing special funds or providing special maintenance allowances for the retraining of industrially disabled employees. In addition to such specific provisions, all states have now accepted the provisions of the Federal Vocational Rehabilitation Act which sets up a Federal fund to assist in training people who are disabled by industrial accidents. The Rehabilitation Act not only provides for vocational rehabilitation, but for surgical and limited hospital service when needed to carry out the rehabilitation of the handicapped person. In the case of civil service workers, maritime employees and civil defense workers the Act provides for complete reimbursement to the state for money expended under the terms of the law. For industrial workers and others it provides for 50 per cent reimbursement.

---

* All compensation figures in this article reflect 1955 statutory provisions. At every general session of the state legislatures and in Congress, bills are introduced to increase Workmen's Compensation benefits. For example, effective June 29, 1956, the Virginia Act has been amended to provide for a $30 maximum weekly payment, a $9,000 maximum death benefit, and a $12,000 amount limit.

† That is, the Federal Employees' and the Longshoremen's and Harbor Workers' Compensation Acts.

In Maryland and the District of Columbia compensation is allowed for permanent partial disability in addition to compensation for temporary total disability, whereas in Virginia compensation for temporary disability is credited against an award for permanent partial disability.

For permanent total disability, although there is a maximum and minimum weekly payment range in every jurisdiction, there is no amount limit in the District of Columbia. In Maryland the amount limit is $12,500 and in Virginia, $10,800.

Criticism has been directed at those Acts which have an amount limit in the cases of fatal injuries or permanent total disability. It is alleged that such limitation fails to effectuate the purpose of Workmen's Compensation statutes to replace all or part of income lost through industrial injuries. In the words of Lloyd George, "The cost of the product should bear the blood of the workman." The argument is advanced that industrial products are sold throughout the Nation and the world, and therefore the community should not have to bear the burden of supporting a worker or his dependents after his benefits under the Workmen's Compensation Act have expired, but that industry must count such an expense as a part of the cost of production to be borne by the consumer.

A fairly recent development in the field of Workmen's Compensation is the establishment of "Second Injury Funds," usually financed by employers in various ways. The concept is that, where a worker has an existing disability and is again injured, the employer is required to compensate him only to the extent that disability would have resulted from the second injury if there had been no preëxisting disability. For example, if a man has but an eye when he begins employment with his current employer and he loses the sight of this eye through an industrial injury or disease, the current employer is required to compensate for the loss of the 1 eye only and not for the permanent total disability which actually results. The Second Injury Fund pays the difference between the 2 amounts on the theory that otherwise workers with a handicap would not be able to find employment, as the potential liability in such an instance would render the worker an undesirable risk.

Medical treatment is required to be furnished by the employer in the typical statute and, strictly speaking, is not classified as compensation. In Maryland and the District of Columbia there is no limitation on the amounts required to be expended and medical care must be supplied as long as necessary. In Virginia there is no limitation as to dollar amount of medical aid, but there is a limitation of 10 months beyond which the employer is not required to furnish medical treatment. The trend toward rehabilitation provisions in Workmen's Compensation Acts will result ultimately in ameliorating or eliminating the severity of curtailing medical treatment after a period of time or the expenditure of a specified dollar amount.

There are a number of other features of a typical Workmen's Compensation Act relating to the adjective side of Workmen's Compensation, such as limitations periods, filing of reports, securing of payments, etc., which are important but cannot be covered in this talk.

SOME OBSERVATIONS ON WORKMEN'S COMPENSATION THAT MAY BE OF PARTICULAR INTEREST TO PHYSICIANS

Fees. The typical Workmen's Compensation Act does not contain a schedule of fees for treatment of particular injuries or occupational diseases but provides that fees and other charges for treatment shall be limited to such charges as prevail in the same community for similar treatment of injured persons of like standard of living. In my experience it has been a rare instance that has required negotiation of a fee charged for treatment of a disabled employee, and I believe that most physicians are willing to accept the aforementioned criteria in rendering their statement to the employer. The public officials who administer the Workmen's Compensation Acts soon come to know what the medical profession considers to be a fair fee in the community for the treatment involved.

Medical evidence. In compensation law the administrative-law-evidence problem of expert opinion and official notice finds its principal application in the handling of medical facts. The usual question is the extent to which findings of the existence, causation or consequences of various injuries or diseases can rest upon something other than direct medical testimony—the claimant's own description of his condition, for example, or the commission's expert knowledge acquired not by formal medical education but by the practical schooling that comes with years of handling similar cases.

Award without medical testimony. To appraise the true degree of indispensability which should be accorded medical testimony, it is first necessary to dispel a possible misconception that valid awards can stand only if accompanied by a definite medical diagnosis. True, in many instances it may be impossible to form a judgment on the relation of the employment to the injury or the relation of the injury to the disability, or the nature and extent of the disability, without analyzing in medical terms what the injury or disease is. But this is not invariably so. In a Rhode Island case, for example, the undisputed testimony of the claimant showed that she had been struck a sharp blow on the nipple of the left breast by a bobbin; that about 2 weeks later a lump had formed at that exact spot and pus was beginning to come out, and that shortly after, on the advice of doctors, the breast was removed. The award was attacked on the ground that there was no direct medical testimony fixing the pathologic nature of the condition that necessitated the operation and no medical testimony connecting the blow with the growth. The Supreme Court of Rhode Island rejected this argument and ordered an award to be made. As to the necessity of medical diagnosis in the record, the court said:

> "The first contention, as stated, if literally followed would turn a compensation case into a clinic where doctors seek to determine the 'diagnosis' of a patient's ailment and the 'pathological nature' of that condition according to the more exacting norms of medical science. The application of so strict a rule to establish the required causal relationship in the field of law, where the ultimate objective is the attainment of substantial justice according to the remedial purposes and provisions of the act, would cast an unfair burden upon a person injured by accident."

The court continued, on the subject of the lack of medical testimony on causation:

> "We concede that in the great majority of cases, such testimony ordinarily is necessary because of the seeming absence of connection between a particular accident and a claimed resulting injury. But in other cases involving special and peculiar circumstances, medical evidence, although highly desirable, is not always essential for an injured employee to make out a prima-facie case, especially if the testimony is adequate, undisputed and unimpeached. Thus where, as in the instant case, injury appears in a bodily member reasonably soon after an accident, at the very place where the force was applied and with symptoms observable to the ordinary person, there arises, in the absence of believed testimony to the contrary, a natural inference that the injury, whatever may be the medical name, was the result of the employment."

In arriving at the rule that medical testimony of causal relation is not always indispensable, two underlying reasons may be discerned. The first is that lay testimony, including that of the claimant himself, is of probative value in establishing such simple matters as the existence and location of pain, the sequence of events leading to the compensable condition, and the actual ability or inability of claimant to perform his work; the second is that industrial commissions generally become expert in analyzing certain uncomplicated kinds of medical facts, particularly those bearing on industrial causation, disability, malingering, and the like.

When medical testimony is indispensable. Since these are the reasons for the rule relaxing the necessity for medical testimony, they should set the boundaries of the rule; in other words, reliance on lay testimony and administrative *expertise* is not justified when the medical question is no longer an uncomplicated one and carries the fact-finders into realms which are properly within the province of medical experts. For example, in a Texas case an award was made on the theory that claimant's disability was due to a heat stroke which contributed to his contraction of poliomyelitis, in spite of the fact that the only medical testimony introduced repeatedly denied that claimant had suffered a heat stroke. The award was reversed on the ground that as difficult an analysis as distinguishing heat stroke from the first symptoms of poliomyelitis, or of appraising the possible causal connection between the 2, was peculiarly within the realm of scientific knowledge and not the sort of determination a trier of facts could make independently in defiance of the only expert testimony in the record.

In an Ohio case an employee strained his back by accident and died a year later of cancer of the liver. The court held that an award for death benefits could not stand in the absence of medical testimony tracing the causation of the death to the accident. Massachusetts reached a similar result when the medical question was whether trauma in 1 part of the body could accelerate a quiescent tuberculosis of an entirely different organ. The fact that not every award must be based on medical evidence should not obscure the basic necessity of establishing medical causation by expert testimony in all but the simple and routine cases, and even in these cases such evidence is highly desirable and is part of any well prepared presentation.

Personally, I feel strongly that medical testimony serves a vital function in establishing: (1) causation between an injury and the employment, (2) causation between an injury and the resulting disability, and (3) the nature and extent of the disability, except in the simplest and most obvious cases. This is particularly apparent when it is realized that a typical Act creates a presumption in favor of the claimant that his claim comes within the provisions of the Act in the absence of substantial evidence to the contrary. The mere filing of the claim, therefore, gives rise to the presumption that the injury and disability complained of arose out of and in the course of employment and that the claimant is entitled to the relief provided by the Act. The employer, on the other hand, has the burden of producing substantial rebutting evidence if the claim is to be contested. Because this evidence must of necessity be negative in character, ruling out possibilities of work-connected injury and resulting disability, it poses a formidable problem in many cases. Most claims are legitimate and uncontroverted by the employer or his insurance carrier. There are, however, some fraudulent claims, and an even larger number of claims wherein the disability is asserted to be greater than it actually is. Workmen's Compensation is not charity and an injured worker is entitled to receive the benefits prescribed by the Act. The Act should be construed liberally to effectuate its purposes of providing rehabilitation and income to those who are injured in producing the goods and services for the common benefit. If, however, the Workmen's Compensation system is not to inexorably devolve into a general accident and health program, prudent and vigilant administration is essential. The medical profession by providing precise and objective medical evidence in compensation cases thus serves to ensure the stability of the system.

Doctor-patient privilege. The common law knew no privilege for confidential information imparted to a doctor. When a physician raised the question before Lord Mansfield in 1776 whether or not he was required to disclose professional confidence, the great Chief Justice drew the line clear: "If a surgeon was voluntarily to reveal these secrets, to be sure, he would be guilty of a breach of honor and a great indiscretion; but to give that information in a court of justice, which by the law of the land he is bound to do, will never be imputed to him as any indiscretion whatever."

The first statute establishing such a privilege was enacted in New York in 1828 and has been followed in some form in nearly two-thirds of the states. Seventeen states maintain the common law position, denying any privilege for information disclosed to medical practitioners, among which are Maryland and Virginia. In the District of Columbia, where the privilege is recognized, the Workmen's Compensation Act provides for the claimant to be examined in the presence of the employer's physician upon request, and upon refusal benefits may be suspended. There are few court decisions touching upon the doctor-patient privilege in Workmen's Compensation proceedings, a fact which in itself signifies that the question is infrequently raised. The few modern decisions in this vein hold that, when an employee submits to an examination by a doctor to whom he is sent by his employer, he has waived any privilege in a Workmen's Compensation proceeding that he might have otherwise been entitled to assert.

It would seem obvious that this line of reasoning is correct, as it would be an anomaly to permit a claimant in a Workmen's Compensation proceeding to assert a confidential relationship with a doctor to whom he was sent by his employer, where the essence of the proceeding is a hearing by a public official to determine the cause, nature and extent of his disability, which may be largely or entirely a medical question.

CONCLUSION

In the course of this address I have traced the evolution of Workmen's Compensation Acts from the old common law concept of no liability to the injured employee except for negligence to the modern Compensation Acts which impose liability without negligence but restrict it within specified monetary limits. My purpose in making this address to members of the medical profession is primarily to promote an understanding of the nature of Workmen's Compensation, and, in particular, the vital role that medical evidence plays

(Continued on page 472)

DR. HUSSEY ELECTED TO AMA'S BOARD OF TRUSTEES

Dr. Hugh H. Hussey, the Medical Society's senior delegate to the American Medical Association, was elected to the Board of Trustees of the AMA at a meeting of its House of Delegates in Chicago, June 14. He will fill the unexpired term of Dr. David B. Allman, who is the AMA's new President-elect.

Dr. Hussey's name was placed before the House by Dr. Raymond T. Holden, the Society's junior delegate. Dr. Holden enumerated some of Dr. Hussey's special qualifications for the office when he addressed the House as follows:

> "It is my honor to appear before you on behalf of my fellow delegate from the District of Columbia.
>
> "Hugh Hussey has been a member of the House since 1950 and is well known to most of you, as, besides his regular performance on reference committees, he has served on several special committees of the House.
>
> "He has been in the practice of medicine for nearly 20 years, and during that time has been a leader in the civic affairs of the District of Columbia as well as in the activities of the Medical Society of the District of Columbia, having been a member of the governing body of that organization for the past 7 years.
>
> "His professional qualifications are superb and have recently resulted in his elevation to the position of Professor of Medicine at Georgetown.
>
> "As Editor of the journal GP he has gained a Nation-wide acquaintance with physicians and with the problems of medicine in all sections of the country.
>
> "His residence in the District of Columbia, seat of the Federal Government, would make him available on short notice to represent the Association before agencies of the Government and Congressional groups, where his known ability to think clearly and logically and to speak calmly would be of inestimable value.
>
> "It is then not just as a reward for past efforts but with the future good of the Association in mind that I nominate Hugh H. Hussey of the District of Columbia to fill the unexpired term on the Board of Trustees."

At the AMA meeting the House of Delegates adopted a resolution asking the Board of Trustees to "initiate direct liaison with the Department of Defense" relative to medical care for dependents of members of the uniformed services. Dr. Hussey was appointed to the committee which will handle this project. Dr. Hussey was also appointed a member of a task force liaison committee which will cooperate and work with the Department of Defense.

The announcement of Dr. Hussey's appointment to Professor and Head of the Department of Medicine at Georgetown University School of Medicine appeared in the July issue of the Medical Annals together with a brief résumé of his medical career. Dr. Hussey is married to the former Wilhelmina Gude; their son, John Christopher, is a student at Alice Deal Junior High School. The Husseys live at 3354 Stuyvesant Place, N.W.

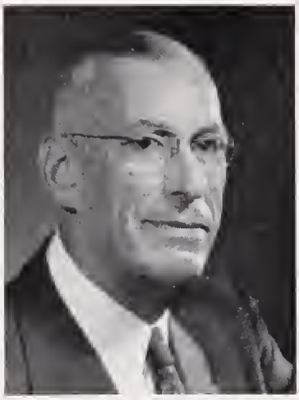
Dr. Allman, the new President-elect of the AMA, will take office in 1957. A surgeon from Atlantic City, N. J., he has served as a member of the AMA Board of Trustees for the past 5 years. In addition to his duties on the Board, he also served as Chairman of the AMA's Committee on Legislation. Much of his time and effort during the past several years has been directed to charitable and philanthropic activities.

HUGH H. HUSSEY, M.D.

Dr. Allman was born in Philadelphia in 1891. He was graduated from Jefferson Medical College, Philadelphia, in 1914. He is a veteran of both World Wars, having served in the Naval Medical Corps in World War I and as surgeon for the Public Health Service in World War II. He was Chief Surgeon of the Atlantic City Hospital and is presently the senior consulting surgical chief.

Dr. Allman is President of the Board of Medical Examiners in New Jersey. He is a Fellow of the American College of Surgeons, a diplomate of the

CAT



Dr. Allman

American Board of Surgery, and is a member of many other scientific organizations, in many of which he has held high offices.

Dr. Dwight H. Murray, of Napa, Calif., was inaugurated, June 12, as President of the AMA. The oath of office was administered by Dr. Gunnar Gundersen, Chairman of the Board of Trustees. Dr. Gundersen also presented Dr. Elmer Hess, the outgoing President, with the Past President's Medal.

Dr. Walter L. Bierring, a former President of the AMA, received the 1956 Distinguished Service Award. He was recognized for his achievements in public health and for 40 years of service in medical examining board work.

A memorial plaque honoring the late Dr. Carl M. Peterson was presented to the AMA by Dr. Ross T. McIntire on behalf of President Eisenhower's Committee on Employment of the Physically Handicapped. Dr. Peterson, who was Secretary of the AMA's Council on Industrial Health for 17 years and Chairman of the Medical Committee of the President's Committee, died last fall of injuries suffered in a plane crash in North Carolina.

Dr. George N. Papanicolaou, Professor Emeritus of Clinical Anatomy at Cornell University Medical College, was the recipient of the 1956 Passano Foundation Award of $5,000 at a reception and dinner, June 13, at the Palmer House. Dr. Papanicolaou received the award for his fundamental researches in exfoliative cytology.

The Chicago meeting, June 11–15, marked the 105th Annual Meeting of the AMA. From Washington 118 physicians were in attendance, many of whom made the trip to Chicago in order to participate in the meeting. The Society's official delegates, Drs. Hussey and Holden, and Theodore Wiprud, Secretary of the Society, attended the meetings of the House of Delegates.

Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, and Dr. Francis M. Forster, Dean of Georgetown University School of Medicine, took part in the general scientific meetings on June 11. In a session on "Poliomyelitis Report," Dr. Scheele was moderator and also spoke on the subject, "The Distribution of Poliomyelitis Vaccine and Its Efficacy in 1955." In an afternoon Panel on Psychiatry in American Medicine, Dr. Forster described "Psychological Handling of the Chronically Ill, the Disabled and the Incurable Patient." Dr. Scheele also gave "A Medical Summary" at a general scientific meeting, June 15, which was devoted to "Medical Aspects of Crash Injuries."

Most of the scientific papers were presented at the sectional meetings. Washington physicians contributed the following papers:

Section on Anesthesiology: "Hypothermia in the Management of the Poor Risk Patient Undergoing Major Surgery," Drs. S. N. Albert, J. Shibuya, M. Ajwani, W. A. Spencer, T. D. Armour, Jr., and J. R. Thistlethwaite.

Section on Experimental Medicine and Therapeutics: "The Most Effective Method of Administration of the Antihypertensive Drugs," Dr. Edward D. Freis in a Symposium on the Management of Hypertension; "The Identification and Clinical Significance of Renal Casts," Dr. George E. Schreiner.

Section on Gastroenterology and Proctology: "Early Diagnosis in Massive Upper Gastrointestinal Bleeding," Dr. Irving B. Brick, in a Symposium on Massive Gastrointestinal Bleeding.

Section on General Practice: "Chairman's Address: The Role of the General Physician in the Atomic Age," Dr. I. Phillips Frohman.

Section on Internal Medicine: "The Billings Lecture: The Natural History of Disease," Dr. William S. Middleton.

Section on Military Medicine: "Chairman's Address: Principles of Preparedness," Rear Admiral Lamont Pugh; "Clinical Investigation in Naval Hospitals," Dr. Howard T. Karsner; "Report of the Office of the Assistant Secretary of Defense (Health and Medical)," Dr. Frank B. Berry.

Section on Nervous and Mental Diseases: "Meralgia Paresthetica," Dr. Harold Stevens.

Section on Obstetrics and Gynecology, in joint meeting with *Section on Urology:* "Urinary Incontinence," Dr. Andrew A. Marchetti.

Section on Physical Medicine: "Rehabilitation of the Chronically Ill in the Veterans Administration," Dr. A. B. C. Knudson, in a Panel Discussion on the Chronically Ill.

Section on Preventive and Industrial Medicine and Public Health: "Chairman's Address: Health Habits and Heart Disease: A Challenge in Preventive Medicine," Dr. Edward P. Luongo; "Hospital and Medical Facilities Survey and Construction Program," Dr. John W. Cronin, before a joint meeting with the Association of Public Health Physicians.

Section on Surgery, General and Abdominal: "Psychosomatic Aspects of Surgery," Rear Admiral Bartholomew W. Hogan.

Section on Urology: "The Mechanism of Inflammation as

Related to Surgical Management and General Resistance," Dr. William P. Herbst, Jr.

Among those who discussed papers at these meetings were Drs. Joseph W. Cooch, William D. Dolan, and Joel B. Hoberman.

A number of Washington physicians took part in the Scientific Exhibit. Dr. Frank W. Konzelmann was chairman of the national committee which selected the award-winning exhibits. Dr. Frohman was elected to serve next year as representative to the Scientific Exhibit of the AMA's Section on General Practice.

Exhibits which originated from Washington are listed below:

Section on Diseases of the Chest: "Antimicrobial Therapy in Tuberculosis," Dr. Francis J. Murray, Tuberculosis Program, U. S. Public Health Service.

Section on Internal Medicine: "Management of Anticoagulant Therapy by a Simple Blood Prothrombin Test," Dr. Benjamin Manchester, George Washington University School of Medicine; "Serum Glutamic Oxaloacetic Transaminase (G.O.T.) in Myocardial Infarction," Drs. Bernard H. Ostrow, Daniel Steinberg, John M. Evans, and Howard E. Ticktin, George Washington University School of Medicine and National Heart Institute, National Institutes of Health.

Section on Nervous and Mental Diseases: "Use of Promazine in the Management of Acutely Disturbed Patients," Drs. John D. Schultz, Joseph F. Fazekas, Paul D. Sullivan, and James G. Shea, District of Columbia General Hospital.

Section on Ophthalmology: "The Newer Corticosteroids in Ophthalmology," Dr. John Harry King, Jr., Washington Clinic, and Dr. Jack W. Passmore, Ocular Research Unit, Walter Reed Army Medical Center.

Section on Physical Medicine: "Rehabilitation Follow-up: A Medical Responsibility in Treating the Whole Man," Drs. A. B. C. Knudson, F. J. Balsam, and J. H. Van Schoick, Veterans Administration.

Section on Surgery, General and Abdominal: "Postoperative Thrombo-embolism," Drs. Howard S. Madigan, Hugh H. Hussey, and Philip A. Caulfield, Georgetown University Medical Center.

Section on Miscellaneous Topics: "Red Cross Blood Program," Dr. David N. W. Grant, American National Red Cross.

Dr. Mark H. Lepper, of Chicago, an Associate member of the District Medical Society, took part in a color telecast, sponsored and produced by Smith, Kline and French Laboratories, of Philadelphia, which originated from the University of Illinois Research and Educational Hospitals. For the first time at an Annual Meeting, a moderator was present with the audience at Navy Pier to provide 2-way communication between the audience, the operating surgeon, and a panel of experts at the hospital. Dr. Lepper was a panelist on Monday, June 11, for two programs, "Cardiac Emergencies" and "The Care of Respiratory Paralysis."

Only one team from Washington took part in the motion picture program, namely, Drs. Harold Jeghers, W. Proctor Harvey, Jack Segal, Franklin Berkman and Donald Schilder, of Georgetown University School of Medicine. The film they presented was entitled "Pitfalls in the Management of Refractory Heart Failure."

Dr. Edward D. Freis, of Georgetown University, was the only Washington physician to participate in the Cardiovascular Conferences, June 13. He conducted a Therapeutic Conference on Hypertension. For these conferences, physicians were invited to bring cardiograms of their patients for interpretation and discussion.

MORE ON POLIOMYELITIS VACCINE

At a meeting of the Advisory Committee on Poliomyelitis to the Director of Public Health on June 25, 1956, it was pointed out that poliomyelitis vaccine was presently available in sufficient quantities to make the following recommendations:

1. Sixty per cent allocation to private physicians of vaccine available to the District of Columbia.
2. That the age limits for vaccination be extended to include all individuals up to the twentieth birthday.
3. That vaccine be made available to all pregnant women regardless of expected date of confinement.
4. That vaccination be continued through the summer months as recommended by the U. S. Public Health Service, American Medical Association, and the American Academy of Pediatrics.
5. That the interval between first and second doses be 1 month (not less than 2 weeks) and the third dose 7 months after the second.
6. That every possible effort be made by the Department of Health to reach that segment of the population unable to afford the services of a private physician.

News and Personals

MEETINGS

The Medical Society's **Council on Rehabilitation** held its first general meeting, July 12, in the Medical Society's building. The meeting was attended by about 100 representatives of both tax-supported and voluntary agencies interested in the field of rehabilitation. With headquarters at the District Medical Society, the Council has the coöperation of the Alexandria City and Arlington, Fairfax, Montgomery, and Prince Georges County Medical Societies.

Dr. Preston A. McLendon, Chairman of the Council, presided and gave some background information on the need for a Council on Rehabilitation and what it planned to accomplish. He also announced the appointment of Miss Josephine J. Albrecht, formerly Executive Secretary of the Health Section, United Community Services, as head of the project's professional staff. Miss Albrecht, Executive Secretary of the Council, outlined the first steps in getting the project under way.

Others who spoke were Dr. Zigmond M. Lebensohn, member of the Executive Committee of the Council; the Honorable David B. Karrick, Commissioner for the District of Columbia; and Mr. E. Emory Ferebee, Deputy Director of the Office of Vocational Rehabilitation, Department of HEW.

This meeting was unique in that it represented the first attempt of organized medicine to spearhead a movement designed to integrate allied disciplines for more effective service to an important segment of the population, the disabled residents of the Washington Metropolitan Area. The project is being financed by a special grant of $18,000 from the Office of Vocational Rehabilitation, Department of HEW.

The Washington Heart Association held its annual meeting in the Medical Society's building, June 27. Dr. John A. Reisinger, retiring President, noted in his report that the results of the 1956 Heart Fund Drive showed greater public interest in heart disease than ever before. Funds amounting to $237,000 were received, which was $37,000 over the goal, which had been set at $200,000. In addition to these funds, a bequest of $50,000 brought the total receipts to $287,000.

Dr. Bernard J. Walsh was elected President for the coming year. Other officers elected were:

Dr. Andrew G. Prandoni, *Vice President*; Dr. John W. Latimer, *Secretary*; and Kenneth Birgfeld, *Treasurer*.

Dr. Walsh and Mrs. C. Thomas Clagett were named delegates to the American Heart Assembly. Colonel Thomas W. Mattingly, Chief of Cardiology at Walter Reed Army Hospital, was elected to the Board of Trustees. Among those reëlected to the Board were Dr. Edgar W. Davis and Dr. W. Proctor Harvey.

Several Washington physicians took part again in the **36th Annual Session of the Southern Pediatric Seminar,** held at Saluda, North Carolina, July 9–28.

Dr. Hugh H. Hussey served again as Dean of Internal Medicine. Assisting him were Drs. Sol Katz, Edgar W. Davis, Darrell C. Crain and Marcus Schaaf, of Washington; Dr. Eugene A. Stead, of Duke University School of Medicine; and Dr. Arthur J. Merrill, of Emory University School of Medicine.

Papers presented by Washington physicians were: "The Jaundiced Patient" and "Talking to Patients about Diseases" (Hussey); "Solitary Pulmonary Tumors," "A Common but 'Missed' Pulmonary Disease," and "Sarcoidosis" (Katz); "The Patient with a Painful Shoulder" and "Use of Cortisone and Newer Steroids for Rheumatoid Arthritis" (Crain); "Bronchogenic Carcinoma" and "Mediastinal Tumors" (Davis); "Problems in Endocrine Diagnosis" and " 'Indigestion' and Related Problems"

(Schaaf); the latter paper was co-authored by Dr. Hussey.

In addition, Dr. Katz moderated two Diagnostic Conferences, July 13 and July 16. Drs. Crain, Hussey, Merrill and Stead participated in the panel on July 13, and Drs. Stead, Schaaf, Davis and Hussey, in the panel on July 16.

The faculty members volunteer their services for this unique teaching center, where the most advanced information—not medical rarities—is presented. Faculty and registrants are encouraged to bring their families because the locale is a vacation area and the Seminar is planned to provide a balanced fare of teaching, fellowship, and recreation.

The American Therapeutic Society held its **57th Annual Meeting** at the Sheraton-Blackstone Hotel, June 7–10, prior to the AMA meeting. Dr. Oscar B. Hunter, Jr. gave his Secretary's Report at the Business Meeting, June 8, and later read an obituary of the late Dr. James Alexander Lyon, of Washington.

The Second Oscar B. Hunter Memorial Award in Therapeutics went to Dr. E. M. K. Geiling, Professor of Pharmacology and Chairman of the Department, University of Chicago. The paper which won the award was entitled "The Value of the Radioactive Isotopes in Pharmacologic Research."

The Section on Radiology of the Medical Society elected the following officers at its May meeting:

Dr. David H. Rosenfeld, *Chairman*; Dr. Forrest V. Schumacher, *Vice Chairman*; and Dr. Melvin O. Goodman, *Secretary-Treasurer*.

The District of Columbia Dental Society, at its meeting, June 12, installed Dr. Z. Bernard Lloyd as President for 1956–57. Dr. Lloyd is Director of the Department of Orthodontics at Georgetown University School of Dentistry.

The new President-elect of the Society is Dr. E. Milburn Colvin, Jr. Dr. John S. Clemence was elected Vice President, and Dr. J. F. Keaveny and Dr. Edward D. Leifer were reëlected Secretary and Treasurer, respectively.

GENERAL NEWS

At the meeting of the **Executive Board of the Medical Society of the District of Columbia,** June 25, Dr. Hugh H. Hussey, the Society's senior delegate to the AMA, submitted his resignation as a member of the Executive Board and as Associate Editor of the MEDICAL ANNALS. The first action was necessary because of his recent election to the AMA's Board of Trustees. The Board accepted his resignation with deep regret, and voted that during Dr. Hussey's trusteeship with the AMA he be afforded the privileges of the Executive Board without a vote. Dr. Raymond T. Holden was named senior delegate to the AMA. Dr. Victor R. Alfaro, alternate delegate to Dr. Hussey, will serve as junior delegate.

At the March 28, 1955 meeting of the Board, the following members had been appointed to a Special Committee on Hospital Regulations to work with the D. C. Department of Public Health: Dr. Clayton B. Ethridge, *Chairman*; Drs. Karl C. Corley, John M. Orem, Montgomery Blair, Jr., Oscar B. Hunter, Jr., Paul Kiernan, Albert E. Marland, and Herbert P. Ramsey. It was voted that this Special Committee on Hospital Regulations be continued as presently constituted.

A request from the Secretary of the Section on Neurology and Psychiatry that the name of the Section be changed to the Section on Neurology, Neurosurgery and Psychiatry was approved, and the Secretary was instructed to draft the required amendment to the Constitution and By-laws.

The Board voted that the Medical Advisory Committee to the D. C. Director of Health on the Health Department Budget be designated a special committee of the Society rather than an advisory body to the Director of Health, and that the Committee be designated the Special Committee on the Health Department Budget. Members of the Committee are: Dr. William P. Herbst, Jr., *Chairman*; Drs. Walter A. Bloedorn, Crenshaw Briggs, Warwick T. Brown, Paul B. Cornely, Francis M. Forster, Hugh H. Hussey, George Maksim, Preston A. McLendon, Winfred Overholser, Herbert P. Ramsey, R. Lomax Wells, and Wallace M. Yater.

Upon the recommendation of the Medical Bureau Committee, a rate increase for Secretarial Service was approved, making the new rate $12.00 per month instead of $10.00. The increase was needed to pay the switchboard operators a salary commensurate with the prevailing wage scale and to employ additional full-time operators to handle the expanded facilities.

Dr. Samuel Diener and Dr. William T. Gibb, Jr., Chairman and Vice Chairman, respectively, of the Committee on Coöperation with the D.C. Bar Association, were appointed to represent the Society at the National Conference on Citizenship, to be held in Washington, September 17–19. The appointments were made at the request of Mr. Justin Miller, President of the Conference.

The Secretary read a letter from Mr. C. Joseph Stetler, Director of the AMA Law Department, praising the contribution which Mr. Warren E. Magee, the Society's Legal Counsel, made to the first Conference of Attorneys Representing State and County Medical Societies, in Chicago, on April 19–20, 1956.

The Sixth International Congress of Otolaryngology will be held in Washington, D.C., May 5 to 10, 1957. Dr. Paul H. Holinger, General Secretary, advises that applications to present papers are being received now, and anyone wishing to present a paper should make known his intentions prior to the deadline of October 1, 1956. Applications to present motion picture films should be sent in before October 1 also. Communications should be addressed to Dr. Holinger at 700 North Michigan Avenue, Chicago 11, Illinois.

The Washington Heart Association is providing summer grants of $600 each to seven District of Columbia students in various scientific fields. The program is designed to help students obtain research training not ordinarily acquired during regular academic courses. Dr. John M. Evans is Chairman of the Association's Research and Training Committee, which is sponsoring this summer fellowship program.

Five students at George Washington University are grantees. Mr. Alan C. Levy, candidate for a master of science degree in physiology, has been assigned to study under Dr. Joseph W. Still, Assistant Professor of Physiology, on "The Physiological Controls of Blood Viscosity." Mr. Jurgens Piper and Mr. Thomas Mould, both second year medical students, are coöperating in two studies headed by Dr. Frank D. Allen, Assistant Professor of Anatomy, one on "Studies of the Ductus Arteriosus in the Incubated Fetal Chick," and the other, "A Preliminary Study of the Source and Function of Norepinephrine in the Fetus and Changes in Tissues Producing That Substance in the Pregnant Mammal." Mr. Irwin Freedman and Mr. William Pogue, both first year medical students, are studying with Dr. Joseph H. Roe, Professor of Biochemistry, on "Glycogen Metabolism."

Mr. Donald Armento, senior medical student at Georgetown University, is assisting Dr. Charles A. Hufnagel, Director of Experimental Laboratory and Surgery at Georgetown, on a project involving the use of an oxygenator pump.

Miss Carolyn Cannon, candidate for a master of science degree in pharmacology at Howard University, is helping Dr. Walter M. Booker, Professor of Pharmacology at Howard, on a study entitled, "The Effects of Adrenosteroids on the Perfused Rabbit Heart and Dose-response of Certain Cardiac Drugs during Hypothermia."

To create interest in cancer detection and research, the **American Cancer Society** made available fellowships to 16 medical students from the entire United States to enroll for eight weeks' summer study at the Memorial Hospital for Cancer and Allied Diseases in New York.

The students from Washington, D. C. were selected by the Professional Education Committee of the District Chapter, under the chairmanship of Dr. Theodore Winship, from a list of candidates furnished by the Dean of each medical school. Recipients of the special grants for cancer education were: Miss Randi V. Rosvoll, George Washington University; Mr. Charles Payne, Georgetown University; and Mr. Edward Gibson, Howard University. Assisting Dr. Winship in the selection of students were Drs. Calvin T. Klopp, Murray M. Copeland, Paul B. Cornely, and Herbert M. Giffin. The local chapter is paying each student $150 for travel expenses and spending money.

Dr. Joseph H. Roe, Professor of Biochemistry at George Washington University, was awarded the Ernst Bischoff Award as the year's outstanding clinical chemist. The award, consisting of a medal, a scroll of honor, and a sum of money, is made annually to the outstanding biochemist of the Nation by the American Association of Clinical Chemists. Dr. Roe will receive the award in the fall at the First International Congress of Clinical Chemistry in New York.

Dr. Roe has developed eleven highly useful analytic methods for determining constituents of body fluids or tissues, such as blood, plasma, muscle tissue, and others, all of which are in daily use by physicians and hospitals throughout the country.

Dr. Roe has headed the University's Biochemistry Department for the last 28 years.

The District of Columbia General Hospital opened a **Medical-Vocational Evaluation Center,** June 6, which is reported as the first of its type in the Nation. The Center is expected to provide the Departments of Public Health, Public Welfare and Vocational Rehabilitation with a medical-vocational evaluation of severely disabled District residents and to help in planning and providing for their needs more adequately and economically.

"Medical Horizons," a medical documentary TV series sponsored by Ciba Pharmaceutical Products, Inc., is returning this fall for a minimum of 39 weeks. The program will be telecast each Sunday over ABC-TV, from 4:30 to 5:00 p.m., EDT, starting September 9. The American Medical Association has announced that it will continue to coöperate in the presentation of these half-hour documentaries. Don Goddard will return as host-narrator, and Dr. William T. Strauss will continue as medical supervisor.

Physician friends of **William E. Leahy,** prominent Washington attorney and civic leader, were saddened to learn of his death, June 5, at his home at 3325 Garfield Street, N.W.

Mr. Leahy had practiced law in Washington for more than 42 years. He was Chairman of the District Commissioners' Citizens Advisory Council. He served as Director of Washington's Selective Service organization during World War II and since 1948, when the draft was renewed. He was active in a multitude of other civic affairs.

Mr. Leahy, it will be remembered, played a prominent role in the defense of the Medical Society and the individual members who were brought to trial in 1941 for violation of the Sherman Anti-trust Act.

PERSONALS

A surprise announcement, which appeared in the newspapers, June 30, was the resignation of **Dr. Leonard A. Scheele** as Surgeon General of the U. S. Public Health Service. The resignation, effective August 1, came less than three months after Dr. Scheele had been sworn in for a third 4-year term as Surgeon General of PHS.

Dr. Scheele will assume the presidency of the Warner-Chilcott Laboratories, Inc. The Laboratories, located in Morris Plains, N. J., are operated by the Warner-Lambert Pharmaceutical Company, an international drug firm.

Dr. Scheele was graduated from Wayne University School of Medicine in 1933 and went directly into the Public Health Service. During World War II he directed public health work in North Africa and Italy, and later was a member of General Eisenhower's civil affairs and military government staff in Northwest Europe. In 1948, when he was appointed by President Truman to head Public Health Service, he became the youngest Surgeon General in the Nation's history. Previous to that post, he was Director of the National Cancer Institute.

Dr. James A. Gannon received the following citation at the commencement exercises of Georgetown University, June 10: "Whereas it is truly meet and just that those who have been blessed with length of days should receive a token of our esteem, a witness of our pride, a memorial of Alma Mater's love and affection; therefore, the President and Faculty of Georgetown University do hereby extend to you heartfelt congratulations on this memorable occasion, the golden jubilee of your graduation from Georgetown. May our Heavenly Father continue to bless you and yours for many fruitful years to come."

After graduating from Georgetown University School of Medicine in 1906, Dr. Gannon taught at his Alma Mater for 25 years; from 1919 to 1933 he was Associate Professor of Surgery. For 14 years, 1914 to 1928, he was Chief of Staff and Chief Surgeon at D. C. General Hospital.

Dr. Gannon

From 1940 to 1952, he served on the Board of Education of the District of Columbia, and during that time served for a term as Vice President of the Board.

Dr. Gannon, a Life member of the District Medical Society, has been very active in its activities. In 1925 and again in 1929, he was Chairman of its Executive Committee. In 1954 he received the Society's Certificate for Meritorious Service for his contributions in the field of surgery and for his teaching and civic activities.

Dr. Gannon is a Life Fellow of the American College of Surgeons and is a Past President of the Washington Academy of Surgery. He has been active in many other organizations, still retaining his membership in the Cosmos Club and the Oldest Inhabitants' Association of D. C. Since April, 1956 he has been broadcasting daily over WTOP on "Tell Me Doctor."

Dr. Stanhope Bayne-Jones retired at the end of June as Technical Director of Research in the Office of the Surgeon General of the Army, a post he had held since 1953. He will continue his work in the Surgeon General's Office on a consultant basis.

Upon his retirement he was awarded the highest Army civilian award, the Decoration for Exceptional Civilian Service, by Brig. General John R. Wood, Director of the Walter Reed Army Institute of Research, on behalf of the Surgeon General. Dr. Bayne-Jones has been awarded other honors, including the Distinguished Service Medal, Silver Star, two oak leaf clusters, the Army Commendation Ribbon, and the Typhus Commission Medal, as well as the British Military Cross, Order of the British Empire, and the French Croix de Guerre.

During a long and distinguished medical career, all his practice has been institutional and consultative. He was formerly Professor of Bacteriology at Rochester and Yale; Dean of Yale University School of Medicine; and President of the Joint Administrative Board, New York Hospital-Cornell Medical Center.

Dr. Bayne-Jones served as an officer in Europe in World War I. He was in the Surgeon General's Office from 1942 to 1946 as Deputy Chief of the Preventive Medicine Service, Director of the U.S.A. Typhus Commission, and Administrator of the Army Epidemiological Board. He retired with the rank of Brigadier General in 1949.

Dr. Bayne-Jones is an Active member of the District Medical Society. He lives with his wife at 3227 Reservoir Road, N.W.

Dr. Robert H. Parrott became Physician-in-chief of Children's Hospital, July 1. He will supervise the medical care provided for patients at the Hospital and will head the education and research programs.

Dr. Parrott is a medical graduate of Georgetown University (1949). From 1950 to 1952, he served first as resident and then as Assistant Chief Resident on the staff of Children's Hospital in Washington. For the past four years, he has been on the staff of the National Institutes of Health as a clinician and researcher. During this time he also maintained his affiliation with Children's Hospital. For the past year, Dr. Parrott has been Editor-in-chief of *Clinical Proceedings*, published by the Medical Staff and Research Foundation of the Hospital. Dr. Parrott is the author of a number of scientific articles published in other journals. He holds an appointment as Assistant Clinical Professor in Pediatrics on the faculty of Georgetown Medical School. He is a diplomate of the American Board of Pediatrics and an Associate member of the District of Columbia Medical Society.

The post which Dr. Parrott assumes is a new one at Children's. Dr. William F. Burdick continues as Chief of Staff at the Hospital, which position he has held since the death in 1954 of Dr. Hugh J. Davis.

Dr. Dorothy S. Jaeger-Lee, who changed her membership from Active to Associate when she moved recently to Atlanta, Georgia, has been appointed pediatric consultant physician to the Division of Maternal and Child Health of the Georgia Department of Public Health.

Dr. George E. Armstrong, Director and Vice Chancellor of New York University-Bellevue Medical Center in New York City, has been elected Vice Chairman of the Veterans Administration Special Medical Advisory Group. Dr. Armstrong, who was formerly Surgeon General of the Army, is an Honorary member of the District Medical Society.

Dr. William N. Wooldridge has been appointed Director of the District Health Department's Bureau of Laboratories and Pharmacies. Dr. Wooldridge has served in the District Government since 1936; before his recent promotion he was Acting Director of the Bureau.

At the 22nd Annual Meeting of the American College of Chest Physicians in Chicago, June 6 to 10, **Dr. Edgar W. Davis** was reëlected Governor of the College for the District of Columbia.

Major General S. B. Hays, Surgeon General of the Army, was one of two physicians elected to honorary fellowship in the College at the annual convocation, June 9.

Dr. Louis K. Alpert has been elected to the Council of the American Diabetes Association. Dr. Alpert has served twice as National Chairman of the ADA's Committee on Detection and Education, which directs the Nation-wide Diabetes Detection Drive each November.

Colonel Raymond Maret, who until recently was Chief of Medical Service of the U. S. Army Hospital at Fort Hood, Texas, is now at the Boston City Hospital taking a three months' postgraduate course in internal medicine. He plans to leave on September 1 for duty at the Headquarters of the First Army, Governors Island, New York.

At a meeting on May 27, 1956, in Vienna, the Council of the Deutsche Dermatologische Gesellschaft elected **Dr. Lee McCarthy** as an honorary member. The recognition came to Dr. McCarthy for his authorship of two books, one on "Histopathology of Skin Diseases," which has been translated into German, and the other on "Diseases of the Hair." Dr. McCarthy and Professor Hans Gans, President of the Council, were fellow students in Vienna during the years 1920–24. Professor Gans is now Professor of Dermatology at the University of Frankfurt am Main.

Dr. Abraham I. Gimble, an Associate member of the Medical Society, began a year's residency at the Michael Reese Hospital in Chicago, July 1.

Dr. Thomas F. Cleary has resigned his membership because he is establishing a practice in Wenona, Illinois.

Another recent resignation is that of **Dr. Thomas W. Stewart,** Associate member, who is now practicing in Lynchburg, Virginia. His address is 1411 Langhorne Road.

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional current books which, in their opinion, merit comment.

A Follow-up Study of War Neuroses. VA Medical Monograph. NORMAN Q. BRILL, M.D., Professor of Psychiatry and Superintendent and Medical Director, The Neuropsychiatric Institute, University of California School of Medicine, Los Angeles, California; AND GILBERT W. BEEBE, PH.D., Statistician, Follow-up Agency, Division of Medical Sciences, National Research Council, Washington, D.C. Pp. 393. Washington 25, D.C.: Veterans Administration, 1955.

Centennial Papers, Saint Elizabeths Hospital 1855–1955. Centennial Commission, Saint Elizabeths Hospital. Pp. 251. Baltimore: Waverly Press, Inc., 1956.

Collected Reprints of the Grantees of the National Foundation for Infantile Paralysis 1955. Volume XVI. Parts I and II. New York: The National Foundation for Infantile Paralysis, 120 Broadway.

The Morphology of Human Blood Cells. L. W. DIGGS, M.A., M.D., Professor of Medicine and Director of Medical Laboratories, University of Tennessee and City of Memphis Hospitals; Consultant in Hematology, Armed Forces Institute of Pathology, Washington, D. C.; DOROTHY STURM, Instructor, Memphis Academy of Arts; AND ANN BELL, B.A., Instructor in Medicine, University of Tennessee. Price, $12.00. Pp. 181, with 54 illustrations. Philadelphia: Saunders, 1956.

A Dictionary of Dietetics. RHODA ELLIS, PH.D., Instructor of Foods and Nutrition, Department of Home Economics, Brooklyn College, New York. Pp. 152. New York: Philos. Libr., 1956.

Sports Injuries Manual for Trainers and Coaches. DONALD F. FEATHERSTONE, Member of the Chartered Society of Physiotherapy; Member of the Committee for Research into the Treatment of Athletic Injuries; Principal of the Athlete's Injury Clinic, Southampton; Physiotherapist to Southampton Football Club; Honorary Physiotherapist to Hampshire County Cricket Club; Physiotherapist and Trainer to Southampton Speedway Team; Late Physiotherapist to Dr. Woodard's Athletes' Injury Clinic, 80, Harley Street, London, W. 1; Late Student-Supervisor, The Prince of Wales General Hospital, London, N.W. 19; Late Assistant Physiotherapist to Garston Manor Rehabilitation Centre, Watford, Herts; Late Assistant Physiotherapist, Physical Medicine Dept., Central Middlesex Hospital, London, N.W.10. Foreword by R. Salisbury Woods, M.D., F.C.C.S. Price, $6.00. Pp. 132. New York: Philos. Libr., 1956.

The Management of Menstrual Disorders. C. FREDERICK FLUHMANN, B.A., M.D., C.M., Clinical Professor of Obstetrics and Gynecology, Stanford University School of Medicine, San Francisco, California; Assistant Visiting Obstetrician and Gynecologist, Stanford-Lane Hospitals; Courtesy Staff, Children's and Mount Zion Hospitals, San Francisco, California; Fellow, American Gynecological Society; Past President, San Francisco Gynecological Society and Pacific Coast Obstetrical and Gynecological Society. Price, $8.50. Pp. 350, with 121 illustrations. Philadelphia: Saunders, 1956.

The Office Assistant in Medical or Dental Practice. PORTIA M. FREDERICK, Instructor, Medical Office Assisting, Long Beach City College, AND CAROL TOWNER, Executive Assistant, Department of Public Relations, American Medical Association. Price, $4.75. Pp. 351, with 55 illustrations. Philadelphia: Saunders, 1956.

Treatment of Heart Disease; A Clinical Physiologic Approach. HARRY GROSS, M.D., F.A.C.P., Attending Physician, the Montefiore Hospital; Assistant Clinical Professor of Medicine, Columbia University College of Physicians and Surgeons, AND ABRAHAM JEZER, M.D., Attending Physician, the Montefiore Hospital; Assistant Clinical Professor of Medicine, Columbia University College of Physicians and Surgeons. Price, $13.00. Pp. 549, with 91 illustrations. Philadelphia: Saunders, 1956.

Textbook of Medical Physiology. ARTHUR C. GUYTON, M.D., Professor and Chairman of the Department of Physiology and Biophysics, University of Mississippi School of Medicine. Price, $13.50. Pp. 1030, with 577 illustrations. Philadelphia: Saunders, 1956.

Anatomy for Surgeons: Volume 2. The Thorax, Abdomen and Pelvis. W. HENRY HOLLINGSHEAD, PH.D., Professor of Anatomy, Mayo Foundation, University of Minnesota; Head of the Section of Anatomy, Mayo Clinic, Rochester, Minnesota. Price, $20.00. Pp. 934, with 1109 illustrations. New York: Hoeber, 1956.

Physical Diagnosis, 5th edition. RALPH H. MAJOR, M.D., Professor of Medicine and of the History of Medicine, The University of Kansas, AND MAHLON H. DELP, M.D., Professor of Medicine, The University of Kansas. Price, $7.00. Pp. 358, with 536 illustrations. Philadelphia: Saunders, 1956.

Textbook of Urology. VICTOR F. MARSHALL, M.D., F.A.C.S., Associate Professor of Clinical Surgery (Urology), Cornell University Medical College; Attending Surgeon-in-Charge, Urology, James Buchanan Brady Foundation of the New York Hospital; and Associate Attending Urologist, The Memorial Center for Cancer and Allied Diseases, New York City. Price, $5.50. Pp. 268. New York: Hoeber, 1956.

New and Nonofficial Remedies Containing Descriptions of Drugs, Evaluated by the Council on Pharmacy and Chemistry of the American Medical Association, 1956. Pp. 540. Philadelphia: Lippincott, 1956.

The Recovery Room—Immediate Postoperative Management. MAX S. SADOVE, M.D., Professor of Surgery (Anesth.) and Head, Division of Anesthesiology, University of Illinois College of Medicine and the Research and Educational Hospitals, AND JAMES H. CROSS, M.D., Clinical Assistant Professor in Surgery, University of Illinois College of Medicine, with contributions by 24 authorities. Price, $12.00. Pp. 597, illustrated. Philadelphia: Saunders, 1956.

Tuberculosis in Obstetrics and Gynecology. George Schaefer, M.D., F.A.C.S., F.I.C.S., Assistant Professor of Clinical Obstetrics and Gynecology, Cornell University Medical College; Attending Obstetrician and Gynecologist, Triboro Hospital; Diplomate, American Board of Obstetrics and Gynecology; Fellow, American Academy of Obstetrics and Gynecology; Fellow, American Trudeau Society. Price, $8.75. Pp. 307, with 58 illustrations. Boston: Little, 1956.

The Doctors. A Great Behind-the-Scenes Novel of the Parisian Medical World. Andre Soubiran, M.D. Translated from the French by Oliver Coburn. Price, $ .50. Pp. 380. New York: Popular Library, 1956.

Hypnotic Suggestion; Its Role in Psychoneurotic and Psychosomatic Disorders—A Thesis. S. J. Van Pelt, M.B., B.S., President of the British Society of Medical Hypnotists; Editor of the *British Journal of Medical Hypnotism.* Price, $2.75. Pp. 95. New York: Philosophical Library, 1955.

Ciba Foundation Symposium on Experimental Tuberculosis—Bacillus and Host—with an Addendum on Leprosy. G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch.; Margaret P. Cameron, M.A., A.B.L.S., editors, assisted by Cecilia M. O'Connor, B.Sc. Price, $9.00. Pp. 396, with 69 illustrations. Boston: Little, 1955.

The Menninger Story. Walker Winslow. Price, 5.00. Pp. 350. New York: Doubleday, 1956.

JOHN ROBERT LLOYD, B.S., M.D.
(1899-1956)

In Memoriam

Our heads are bowed in grief because one so endeared should be called from among us, at the zenith of his career—perhaps a greater work to do.

Here indeed was a gentleman, possessing those qualities which combined to create human greatness. He had a love for his fellow man, with a genuine and never faltering devotion to his art. Here was a meticulous, painstaking man, never completely satisfied until the best effort had been made, not for one, but for all who came under his care. Many have blessed him and many will continue to give thanks because they were relieved of pain or made to see again. No monument in stone could be erected to his memory that would compare with the gratitude and high esteem that live in the hearts of those he served.

He was our neighbor and our friend. To know him better was to love and respect him more for his integrity, his solid moral fiber, his devotion and careful planning for the loved ones he knew that one day he must leave behind.

Here was a man who made our world a better place in which to live because he graced it with his presence.

Leland E. Stevenson, M.D.

Dr. John Robert Lloyd, well known ophthalmologist, died suddenly, July 3, 1956, at his home, 133 Hesketh Street, Chevy Chase, Maryland.

Dr. Lloyd was born in Carbon, Indiana, February 25, 1899, the son of Abraham and Elizabeth Lloyd; the latter survives him. He obtained his early education in Terre Haute, Indiana, and his medical training at Indiana University in Indianapolis. From the latter institution he received his B.S. degree in medicine in 1923 and his M.D. degree *cum laude* in 1925. He interned at Indianapolis City Hospital the following year, then came to Washington to serve a year's residency in ophthalmology at Episcopal Eye, Ear and Throat Hospital.

Dr. Lloyd maintained two offices, one at 1218 Sixteenth Street, N.W., and the other at 4422 East-West Highway, Bethesda. He was on the emeritus staff of Episcopal Eye, Ear and Throat Hospital. During World War II he served as eye examiner of Washington draftees.

Dr. Lloyd was an Active member of the Medical Society of the District of Columbia from 1928, member of the American Medical Association, Past President (1945–56) of the Washington Ophthalmological Society, and a member of the Phi Beta Pi Fraternity. He was a Mason, with membership in Bethesda Lodge No. 204, and belonged to the Rotary Club of Bethesda-Chevy Chase and to the Kenwood Golf and Country Club.

He is survived by his wife, Marjorie Sparks Lloyd, and three daughters, Mrs. Bartlett R. Wailes, of Bethesda, Md.; Mrs. Thomas A. Tyrrell and Mrs. Charles E. Schwab, both of Greenbelt, Md. His mother lives at 4318 Curtis Road, Chevy Chase, Md.

ARTHUR CARLISLE CHRISTIE, M.D., F.A.C.P., F.A.C.R.
(1879-1956)

Dr. Arthur Carlisle Christie died at his home in Crescent City, Florida, on June 22, 1956. He was born on December 29, 1879 at West Sunbury, Pennsylvania, the son of Dr. Milton H. and Harriet Rhodes Christie. His early education was received in the public schools of Corry, Pennsylvania. He graduated in medicine from the Cleveland College of Physicians (now Western Reserve University Medical School) in 1904. For a short period following graduation from medical school he practiced general medicine in Clymer, New York. This was followed by his entrance into the United States Army Medical School in Washington, D. C., from which he was graduated in 1907 as a First Lieutenant. After various tours of duty in the Army he was ordered in 1912 to report to the Army Medical School as Professor of Roentgenology and Surgery and served in this capacity until 1916. This was the beginning of his career in radiology, the specialty which he practiced so brilliantly for forty years. It was during this tour of duty that Dr. Christie wrote his first book, "A Manual of X-ray Technic," which was a most helpful adjunct to the meager radiologic literature then in existence.

In 1916 Dr. Christie resigned from the Army and formed a partnership with the late Dr. Thomas A.

Groover in the practice of radiology in Washington, D.C. Shortly after the outbreak of World War I he reëntered the service and was appointed Chief of the Division of Roentgenology, Medical Department, U. S. Army, with the rank of Major. Dr. Christie was an outstanding organizer and executive and these two exceptional attributes were tremendously helpful to him, for there was neither a Department of Radiology nor any radiologists in the Army at that time. This proved no real obstacle to him, however, and in a short time radiology, as a specialty, was established in the Army and he had obtained capable personnel to man the necessary posts. He was discharged from the Army in 1919 with the rank of Colonel and resumed his practice with Dr. Groover.

In the fall of 1919 the late Dr. Edwin A. Merritt became associated with Drs. Groover and Christie and the firm became known as Drs. Groover, Christie and Merritt.

Dr. Christie was a prolific writer. In addition to the book, "A Manual of X-ray Technic," he published two other books, "Roentgen Diagnosis and Therapy" (J. B. Lippincott, 1924) and "Economic Problems of Medicine" (MacMillan, 1935). He was editor of the *American Journal of Roentgenology and Radium Therapy* from 1924 to 1929. His contributions to medical literature are far too numerous to list here. They are recorded in the medical literature for the past forty years and are part of the total achievement in the field of radiology during this pioneer period. His writings were by no means limited to the field of radiology; they also covered the broader field of medical economics. He was a staunch supporter of free enterprise and was an outstanding opponent of socialized medicine, so well exemplified by the Minority Report on the Costs of Medical Care which was written largely and so ably defended by him. This will remain forever as a testimonial to his courage and clear thinking.

His medical organizational affiliations were far too numerous to be mentioned here in detail, but a brief listing included the following: Fellow and Past President of the American College of Radiology; Fellow of the American College of Physicians; diplomate and Past President of the American Board of Radiology; a member and Past President of the Medical Society of the District of Columbia; member of the American Medical Association; President of the Fifth International Congress of Radiology; member and Past President of the American Roentgen Ray Society; member of the Radiological Society of North America, and honorary membership in the radiological societies of many foreign countries. He held honorary degrees from Ohio Wesleyan University (M.S. 1919) and American University (D.Sc. 1943).

Dr. Christie was a born educator and loved to teach. He was Professor of Roentgenology at the George Washington University School of Medicine from 1919 to 1932 and was Professor of Clinical Radiology at the Georgetown University School of Medicine from 1929 to 1946. He was Chief of the Department of Radiology at Doctors Hospital from 1939 until he retired.

The sum total of Dr. Christie's activities were not limited to medicine by any means. He was a deeply religious person and was keenly interested in religious and civic work. Many of his writings and much of his effort were directed into these fields. One of his finest lay addresses was on the Constitution of the United States under the title, "Faith of Our Fathers," which he delivered before the Norman Price Post of the American Legion. He was a member of the Board of Trustees of the Metropolitan Methodist Church of Washington, D. C.; a Past President of the Board of Trustees of the American University; a member and Past President of the Washington Y.M.C.A.; a member and Past President of the Washington Rotary Club; and a Past President of the Board of Trustees of the Swartzell Home for Children.

Dr. Christie loved people, and his genuinely warm and friendly personality endeared him to all who knew him. He had great qualities both of mind and heart which were unusual and outstanding. His dominant moral characteristic was a keen sense of justice, right and fair dealing. He was a most tolerant person, but once convinced that a cause was right and just he would throw his entire support into it in a fearless, relentless and untiring manner. He was an indefatigable worker with limitless energy. His many and great accomplishments were made possible only by the fact that he could organize his life "to the *n*th degree," with never an idle or ill-spent moment. Even after his retirement in 1952, up to the time of his death, he insisted that we send him all of our medical journals each month. He painstakingly read and abstracted every article and sent to each of us and to each of our ten residents transcripts of all of these abstracts.

Dr. Christie is survived by his wife, Maude, of Crescent City, Florida; two daughters, Mrs. Geneva Morris, also of Crescent City, and Mrs. Harriet I. Beck, of Presque Isle, Maine, and a son, Carlisle, of Evanston, Ill. Another son, Milton, preceded him in death several years ago. Also surviving are two brothers, Dr. L. Merle Christie, of Woodside, Maryland, and Clare L. Christie, of La Jolla, California, and several grandchildren and great grandchildren.

The world has lost not only a great physician and scientist but a man of noble character and high ideals. His place will long remain unfilled. The many friends of Dr. Christie everywhere share with Mrs. Christie, his daughters, son, and brothers the sorrow and sense of loss which are their special burden in this sad hour, and they extend to them the deepest sympathy in their bereavement.

EDGAR M. MCPEAK, M.D.

Infertility—Simmons

(*Continued from page 418*)

ADDITIONAL REFERENCES

SIMMONS, F. A.: Diagnosis and treatment of the infertile male, in Carter, B. N., editor: Monographs on Surgery, 1951. New York: Nelson, 1950, p. 267.

SIMMONS, F. A.: Diagnosis and Treatment of the Infertile Female. Springfield, Ill.: Thomas, 1954.

Retarded Children's Clinic

(*Continued from page 441*)

3. Room and board per day if patient requires admission to the Hospital $10.00

The clinic has now been at full operation for about 7 months. The waiting time for examination is about 6 months. The staff feels that it is providing physicians of this community with a centralized service for the evaluation of their retarded children. An inspection of the clinic by any interested physician is invited.

National Disease and Therapeutic Index

(*Continued from page 446*)

sought in research; practicing doctors particularly in efforts directed toward preventive medicine; health organizations in planning establishment and development of future programs and revision or possible abandonment of current ones; and pharmaceutical manufacturers in research and product development designed to meet current and future needs. Because of the vast scope of the program, it will be sometime in 1957 before data can be processed and evaluated to determine what may be of benefit to various segments of the profession.

Workmen's Compensation Laws—Crook

(*Continued from page 458*)

in its just administration. Careful, objective medical evidence is the keystone of the administration of Workmen's Compensation, and the realization and acceptance of this principle by the medical profession would go far to ensure fair and equitable treatment to employees, their employers, and the general public, who, in the final analysis, pays the bill.

REFERENCE

Larson's Workmen's Compensation Law, with annual supplements. New York: Matthew Bender and Co., 1952.

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *September*, 1956 NUMBER 9

PRESENT STATUS OF RADIOIODINE IN THYROID DISEASE*

E. RICHARD KING, M.D.

Captain, Medical Corps, United States Navy; Director, Radioisotope Laboratory, United States Naval Hospital, Bethesda, Maryland

THE ORIGINAL REPORTS on physiologic studies using radioiodine were published in 1938 by Hertz, Roberts and Evans[1] and Hamilton.[2] Fifteen years later a panel discussion at the 1953 meeting of the American Goiter Society was held on the subject of "Radioiodine in the Diagnosis and Treatment of Thyroid Disease."[3] During the discussion it was pointed out that over 1,800 patients with toxic goiters had been treated with radioiodine by the panel members; also, that about 1,000 cases of carcinoma of the thyroid were seen in their clinics and that 10 to 15 per cent of these cases were treated with the same isotope.

The almost universal acceptance of radioiodine as a test for thyroid function and as a treatment agent for hyperthyroidism does not mean that there are no differences of opinion as to the methods of applying the isotope and the interpretation of the results. Indeed, the reverse is true, as is customary with new methods, and there are many interpretations as to the applicability of this isotope. It is the intent of this paper to present the present thoughts on these problems and to interpolate the limited experience of the author into the writings of more prominent authorities in this field.

The data presented will be discussed in regard to the diagnostic use of radioiodine, the therapy of hyperthyroidism, and the therapy of carcinoma of the thyroid, in that order.

Diagnostic Application of Radioiodine

The principal use of radioiodine in diagnosis is as a test of thyroid function. Thus the so-called "thyroid uptake" is replacing the basal metabolic rate determination in many, but not in all conditions. In certain cases of "misplaced" thyroid tissue, radioiodine may also be properly used as a "tracer" test. Since the latter occasions are limited we shall discuss them briefly before launching into the larger subject of thyroid function studies.

A "tracer" study implies that after a radioisotope is administered the body is scanned in order to discover where the isotope is deposited.

---

* Presented at the Fifth Midwinter Seminar of the Medical Society of the District of Columbia in Washington, D. C., February 14, 1956.

Since we all know that radioiodine is localized in the thyroid gland, it seems facetious to describe a thyroid function study as a radioiodine tracer study and we have separated the two studies in our discussion. True "tracer" studies with this isotope are limited to the 5 conditions listed in table 1.

TABLE 1

Radioiodine Tracer Studies Are Utilized to:

1. Discover and outline extent of functioning retrosternal goiters.
2. Discover and determine degree of function of metastases from carcinoma of the thyroid.
3. Outline a toxic nodule or nodules by a scanning procedure.
4. Be an aid to diagnosis of thyroiditis.
5. Be an aid to diagnosis of carcinoma of the thyroid.

Unfortunately, many physicians performing radioisotope studies perform thyroid function studies and iodine tracer studies on euthyroid patients with conditions such as nontoxic nodular goiters. Unless there is a question of thyroid dysfunction this is a purposeless procedure. The excuse is that the nodule may be malignant, and there is a possibility that if the nodule can be demonstrated to pick up no radioiodine it would point toward malignancy. Since solitary thyroid nodules are usually routinely removed by surgery at most clinics, the tracer study in this instance has no actual worth. As long as the thyroid gland is present, only a very small percentage of carcinomas of the thyroid or metastases will demonstrate iodine uptake, and from a preoperative tracer study one can form no opinion as to how distant metastases will react to radioiodine therapy once the remaining thyroid tissue is ablated. The routine use of radioiodine tracers in all carcinomas of the thyroid, especially if no cervical nodes are involved, is also open to question. Most users of isotopes have passed through the period where they did tracer studies on all cases. However, after some experience and thought on the subject one wonders if the indiscriminate use of tracer studies on nontoxic nodular goiters, whether of single or multiple nodules, should not be openly condemned. In a normal individual, with a thyroid gland weighing 25 Gm. and receiving a tracer dose of 25 μc., the radiation tissue dose to the thyroid will be in the vicinity of 20 to 25 r.

Radioiodine is of value as a study of thyroid function, the most widely used method being the measure of the 24-hour uptake by the thyroid gland. The dose administered may be as low as 10 μc. if a scintillation counting probe is used. The normal values of thyroid uptake are now stated to be about 15 to 45 per cent of the injected dose 24 hours after the administration. The fact that the normal zone has been altered to the above figure from the original value of 20 to 40 per cent indicates that there is still some doubt as to what is the normal uptake value. The borderline zone between high normal and hyperthyroid with an uptake of 40 to 50 per cent is sometimes difficult to ascertain by the study, and even more difficult is the low normal to hypothyroid zone. It is in the latter zone that the basal metabolic rate is also guilty of false results. Urinary excretion based on the excreted portion of the dose (about 60 to 80 per cent in 24 hours) may also be used as an indirect method of ascertaining thyroid function.

Further studies have been developed in an attempt to better determine the thyroid status. One of the most popular is the determination of the ratio of the organic protein-bound iodine to the inorganic free iodine of the blood. The diagnostic I^{131} dose administered to the patient is increased to about 40 μc. providing a scintillation probe is used, and somewhat higher if a Geiger counter is used. At the 24-hour interval, following the "count" over the thyroid a sample of blood is withdrawn. The blood plasma is obtained and the proteins are precipitated out by trichloracetic acid. The precipitate (organic protein-bound iodine) and the filtrate (inorganic iodine) are counted separately in a well-type scintillation counter. The ratio of the radioactivity of the former to the latter is known as the "conversion ratio." Normal values are expressed as 20 to 40 per cent. Here again, however, there is an overlap at each end of the normal range.

Radioiodine is taken up by the thyroid gland preferentially, and if the gland is more rapidly forming thyroid hormone as in hyperthyroidism the blood iodine level should be lower. It has been known for some time that the salivary glands and the glands of the stomach mucosa retain iodine and secrete it in their juices. Hence the idea of estimating the radioiodine content of saliva was advanced by Thode et al.[4] In this study the patient expectorated a sample of saliva into a clean container at the time his 24-hour thyroid uptake was measured. An aliquot (3 ml.) of the saliva was counted, and the higher the radioiodine content of the saliva the lower the function of the thyroid gland was expected to be.

Many investigators think that the rate of uptake of radioiodine from the blood stream will give a more accurate estimate of the thyroid function.[5] The thyroid clearance rate gives the rate of removal of I^{131} from the plasma by the thyroid gland. It is performed by continuous counting over the patient's thyroid for a predetermined time immediately following the administration of the diagnostic dose of iodine. This dose is usually administered intravenously and the uptake is recorded on a mechanical recorder with the assistance of a counting rate meter. The accepted results of thyroid function tests using radioiodine are given in table 2.

It has been stated that in some cases none of these studies are adequate. This may be due to the fact that we are measuring I^{131} uptake by the thyroid (and presumably the amount of thyroid hormone thus formed), or estimating the level of inorganic iodine and protein organic iodine in the blood. The symptoms of hyperthyroidism are not caused by these factors but by the rate of release of thyroid hormone and its effect on metabolism. As yet we have no definite laboratory measures of the rate of release of the thyroid hormone. We, therefore, end up with using the clinical impression to diagnose many borderline cases. A therapeutic test with an antithyroid drug is often used to assist in the diagnosis of the borderline patient in the euthyroid to hyperthyroid range.

In regard to the best thyroid function studies, let us refer to the panel discussion of the 1953 American Goiter Society Meeting.[3] One member (Clark) believed the conversion ratio was the best over-all procedure, while another (Werner) appeared to place most faith in a carefully performed basal metabolic rate. Miller stated that the final impression was usually based on clinical findings; all of the panel members agreed this was very important. When asked directly what diagnostic procedures utilizing radioiodine were used, the answers were as follows:

Clark (Chicago)—conversion ratio.

Werner (New York)—24-hour thyroid uptake.

Miller (San Francisco)—24-hour thyroid uptake, plus the uptake of the gland at 1, 3, and 5 hours, accordingly.

Rawson (New York)—urinary excretion plus 24- and 48-hour uptake.

TABLE 2

Ranges of Results in Radioiodine Thyroid Function Tests

	Hypothyroid	Euthyroid	Hyperthyroid
Thyroid 24-hr. uptake	Below 15%	15–20% to 40–45%	Above 45%
Conversion ratio: (organic PBI^{131}/total I^{131})	Below 15%	15% to 45–50%	Above 50%
Saliva ratio: ($saliva^{131}/PBI^{131}$)	Over 300	230 to 90	50 to 0
Thyroid clearance: ml./min./$1.73\bar{m}2$	0.0–4.1 (av. 2.0)	3.7–41.0 (17.7)	74.5–512 (210.5)

At the U. S. Naval Hospital, Bethesda, Maryland, we have studied several hundred cases by performing thyroid uptakes, conversion ratios and saliva excretion rates. The latter test is apparently the least useful and probably will be abandoned. However, the 24-hour thyroid uptake and the conversion ratio often complement each other, especially in the normal to hyperthyroid range.

TREATMENT OF THYROTOXICOSIS

The members of the 1953 thyroid panel of the American Goiter Society[3] presented accumulated experience in the radioiodine treatment of over 1,800 thyrotoxic patients. In recent literature Larsson[6] of Stockholm reported results of 370 cases; Chapman and Maloof[7] of Boston 520 cases; Balls, Chamberlain, Rose, Gorsen and Blount,[8] Philadelphia, 400 cases; Seed and Jaffe,[9] Chicago, 100 cases; McCullagh and Richards,[10] Cleveland, 280 cases; and Scott, Seaman, McBryde, and Gottlieb,[11] St. Louis, 195 cases. Cases in the above combined references total over 3,500 patients treated with radioiodine and are tabulated in table 3. If the total number so treated throughout the world could be accumulated it would probably number in the tens of thousands.

TABLE 3

Recent Reports on Treatment of Hyperthyroidism with I^{131}

Author*	Year	No. Cases Treated
American Goiter Society:[3]	1953	
Miller (San Francisco)		200
Clark (Chicago)		700
Werner (New York)		700
Rawson et al. (New York)		120
Larsson[6] (Stockholm)	1955	370
Chapman et al.[7] (Boston)	1955	520
Balls et al.[8] (Philadelphia)	1955	400
Seed et al.[9] (Chicago)	1954	100
McCullagh et al.[10] (Cleveland)	1952	280
Scott et al.[11] (St. Louis)	1952	195
		3,585

* All authors reported remission in 80 to 95% of patients.

Despite the wide acceptance of I^{131} as a rational therapeutic measure in thyrotoxicosis there still remain controversial points. The contraindications for radioiodine therapy in hyperthyroidism as practiced at the U. S. Naval Hospital, Bethesda, Maryland are listed in table 4.

There is no argument with the first contraindication, and no patient who is pregnant past the fourteenth week, or is lactating and breast-feeding the child, is ever treated. If the mother is not feeding the child she would probably fall under the second group. Persons under 40 years of age are not treated with radioiodine unless they are poor surgical risks or refuse surgery and in addition cannot be controlled with antithyroid drugs. The reasons for not treating young people are:

1. The nebulous presence of the possibility of detrimental genetic affects to future generations.
2. The increasingly remote possibility of the I^{131} acting as a carcinogenic agent in the thyroid gland.

In regard to the possible carcinogenic effects to the thyroid of small doses of I^{131} perhaps it would be wise to digress and briefly discuss the incidence of carcinoma of the thyroid. Pemberton[12] reported 15 cases of carcinoma of the thyroid in 3,500 glands excised for exophthalmic goiter, or an incidence of 0.4 per cent of carcinoma in thyrotoxicosis. Since 1940 so many persons have been treated for hyperthyroidism that one wonders why some cases of carcinoma have not appeared in these treated patients due to the natural incidence of the disease. However, not 1 case has been reported on any person treated with I^{131} for hyperthyroidism.

TABLE 4

Contraindications for Treatment of Hyperthyroidism with Radioiodine:

(U. S. Naval Hospital, Bethesda, Md.)

1. Pregnancy and lactation
2. Patients under 40 years of age
3. Toxic nodular goiter (not mandatory)
4. Solitary nodule in a diffuse toxic goiter

According to Pemberton's figures, 15 of the 3,500 cases of thyrotoxicosis collected from the combined references that are lister earlier[3, 6-11] should have carcinoma of the thyroid at the time of treatment. Alexander[13] has studied the incidence of carcinoma of the thyroid in a cross-section of hospital patients in San Francisco and reported the rate of new cases as 3.4 cases per

100,000 population per year. His excellent study and review of the literature also lists 32 articles on the incidence of thyroid carcinoma, and of these cases the incidence of carcinoma discovered during thyroid surgery varied from 2 to 7 per cent. It is apparent that with the large number of thyroid patients being treated with radioiodine the natural incidence of carcinoma of the thyroid should be higher than its present incidence. Nevertheless, the author will agree that to be perfectly safe another 10 years should transpire before we routinely treat the younger age group of thyrotoxic patients with radioiodine.

The reasons toxic nodular goiters are not routinely treated with radioiodine are listed in table 5. Although some clinics do treat this type of hyperthyroidism with radioiodine the radioisotope laboratory at the Bethesda Naval Hospital believes these facts are satisfactory.

TABLE 5

Toxic Nodular Goiter Is Not Routinely Treated with Radioiodine Because:

1. Recurrence rate is higher than in diffuse toxic goiter.
2. A small percentage (1 to 2%) will be malignant.
3. Larger doses required for remission (often twice the dose required by diffuse toxic goiter).

Most users of radioisotopes believe that the indication for radioiodine treatment includes diffuse toxic goiters in patients above the age of 40. As stated, some treat toxic nodular goiter routinely. Miller, Werner and Rawson,[3] Balls,[8] and Larsson,[6] however, prefer not to treat this condition with radioiodine. In addition, Miller[3] reports they treat diffuse toxic goiters of all age groups, including children. He states that this is an investigative procedure and he does not advocate the practice in all clinics until the carcinogenic problem is settled.

The dose administered by all groups depends directly or indirectly upon the size of the gland. Miller[3] stated that the optimum dose to the gland has been shown to be 6,000 rep* delivered throughout complete decay of the isotope.

All of the panel members of the 1953 conference agreed that the error in estimating the pretreatment weight of the thyroid gland, by any means, would be 50 per cent plus or minus and perhaps higher.[3] A review of the recent literature indicates the dosage schedules as listed in table 6.

TABLE 6

Dose of Radioiodine Required in Treatment of Hyperthyroidism

	μc/Gm. Thyroid	Radiation Dose to Gland (rep)	Total mc. (Initial Dose)
Miller[3] (San Francisco)	120	6,000	
Clark[3] (Chicago)	150 (20–40 Gm. gland) 250 (over 40 Gm. gland) 300–350 (toxic nodular goiter)		
Rawson[3] (New York)	140		
Werner[3] (New York)			1–8 (depending on gland size)
Larsson[6] (Stockholm)		5,000–15,000	
Chapman[7] (Boston)	160		
Balls[8] (Philadelphia)			6–10
Seed[9] (Chicago)		10,000	5–6
Bethesda Naval Hospital (1955)			4–7

There is little consistency in these reports. Many workers advocate estimating the weight of the gland and determining the radiation tissue dose to be delivered as an exercise and a training procedure. However, this does not seem practical, and Seed and co-workers[9] and Balls and co-workers[8] doubt the significance of this procedure. Larsson[6] agrees and states predetermined doses have the disadvantages as stated in table 7.

TABLE 7

Treatment of Hyperthyroidism

Predetermined Doses Have Disadvantages (Larsson[6])

1. An accepted discrepancy exists between the tracer uptake and therapeutic dose uptake.
2. Determinations of effective half-life in patients are impractical.
3. Estimate of thyroid size is difficult or impossible.

---

* Roentgen equivalent physical.

The effective half-life of the isotope is utilized in determining the radiation tissue dose. To obtain the effective half-life it is necessary to measure the rate of excretion of radioiodine in the urine or to measure the radioiodine loss in the thyroid. This value is the biologic half-life and is combined with the physical half-life (8 days for iodine^{131}) to give the effective half-life. The biologic half-life determination is performed with tracer doses, and the radio-assays must be performed for several days. One can see this would inconvenience a candidate for isotope therapy, and might not be of any value, as we have noted that the therapeutic dose uptake does not always conform with the "tracer" dose uptake.

TABLE 8

Hypothyroidism Following Treatment of Hyperthyroidism

Author	Per cent
Clark[14] (Chicago)	13
Werner[3] (New York)	7
Miller[3] (San Francisco)	10
Balls[8] (Philadelphia)	18
Bethesda Naval Hospital (1952)[15]	20

At Bethesda Naval Hospital we follow a more or less empirical formula with an initial dose of 4 to 7 mc. of I^{131} depending on the gross size of the thyroid. The patient is seen again in 12 weeks for a reëvaluation. At this time he may be a candidate for another dose of 1 to 3 mc. of I^{131}, although more likely he will be followed another 2 to 3 months before the second dose is administered. Most workers agree that an average of 6 to 12 weeks are required for a remission. Chapman[7] reports he does not retreat his patients for 6 months and that as long as the thyroid uptake is decreasing, as determined by serial uptake studies, they are not retreated.

The results of radioiodine therapy of toxic diffuse goiters are universally good, with a remission rate of 80 to 90 per cent. The incidence of hypothyroidism is more or less constant (table 8).

The response of exophthalmos might also be discussed at this point. The results of treatment of the exophthalmos of hyperthyroidism by I^{131} are listed in table 9. They compare well with response of this condition to surgery. Clark[14] had 94 exophthalmic patients of whom 10 per cent underwent complete regression, 60 per cent were improved, and none became progressively worse. Clark also reported that 3 patients of his series of 700 developed exophthalmos following treatment, but stated he had seen this happen several times following surgical thyroidectomy. Werner[3] and Miller[3] also had 3 patients develop exophthalmos following treatment of hyperthyroidism with I^{131}. Balls[8] had 57 patients of exophthalmos, of which 36 improved, 18 noted no change and 3 had an increase of the eye disturbance following radioiodine treatment. Chapman[7] reported 44 patients with "eye trouble" including exophthalmos, lid retraction and/or chemosis, with 23 improving, 17 noting no difference in symptoms, 4 becoming more severe, and 3 needing temporal decompression. Larsson[6] treated 127 cases with "eye symptoms," 11 of which had an increase in symptoms following I^{131} treatment. I reported 21 cases of hyperthyroidism with exophthalmos of which 11 patients noted a remission of symptoms, 8 noted no change, and 2 noted a progression of symptoms.[15] One of the latter required bitemporal decompression (figures 1 and 2).

TABLE 9

Treatment of Hyperthyroidism

Response of "Exophthalmos"

	No. Cases	Remission or Improved	No Change	Worse	Developed after Treatment
Clark[14] (Chicago)	94	70%	30%		3 cases
Balls[8] (Philadelphia)	57	36	18	3	
Chapman[7] (Boston)	44	23	17	4	
Larsson[6] (Stockholm)	127	"Usually improved"		11	
Bethesda Naval Hospital (1952)[15]	21	11	8	2	

There is a noted discrepancy of the reports as

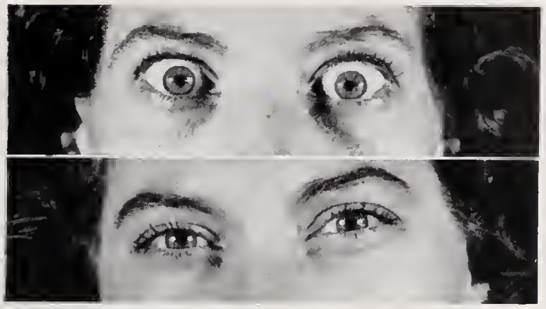


FIG. 1. Exophthalmos responding to I^{131} therapy. Before and 6 months after a dose of 5 mc.

to the relief of exophthalmos and the number of patients noting progression of their symptoms following radioiodine therapy. Thus, Balls, Chapman, Larsson and the author reported cases becoming more severe and in some cases progressing to malignant exophthalmos, while Clark states that none of his cases progressed following treatment.

There have been but few complications reported following treatment of thyrotoxicosis with I^{131}, primarily because the radiation tissue dose to the body other than the thyroid gland is quite low. Chapman and co-workers,[7] however, reported that 6 of their patients lost the hair of their beard, also that 3 other patients suffering from a duodenal ulcer had no ulcer symptoms for several weeks following radioiodine therapy and then bled from a reactivated ulcer. No mention was made as to the dose of I^{131} administered in these cases. These are rather bizarre complications, and to my knowledge have not been reported elsewhere. In the same reference[7] a careful study of younger men and women patients who were treated with I^{131} was made in reference to their libido, potency and sterility, and from the report there seems to be no indication that any of these important functions and capacities were detrimentally affected. Likewise, no reports have been published as to any adverse effect on menstruation, nor on neck structures adjacent to the thyroid, from the doses of I^{131} used to treat thyrotoxicosis.

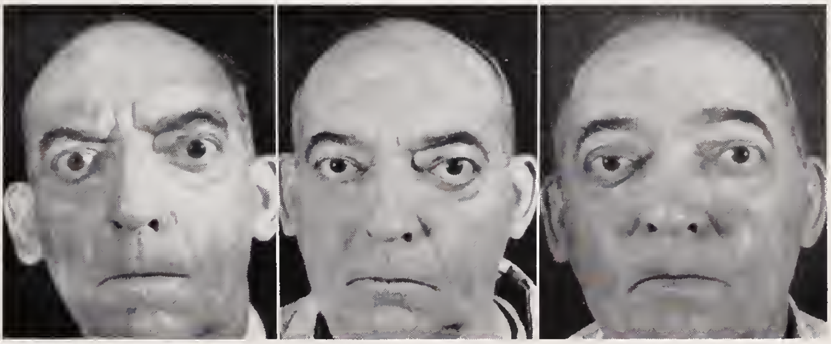


FIG. 2. Exophthalmos not responding to therapy: left, before treatment; center, after treatment; right, malignant exophthalmos, after surgical decompression.

TREATMENT OF CARCINOMA OF THE THYROID

Sokal,[16] in discussing the incidence of carcinoma of the thyroid, has reviewed several articles and accumulated references to 122,000 cases of cancer of all types of which the incidence of carcinoma of the thyroid was 680 cases, or an incidence in all cases of cancer of 0.56 per cent. He also refers to the U. S. Vital Statistics for 1949 as listing 206,000 cases of cancer as a cause of death with 814 cases or 0.4 per cent due to carcinoma of the thyroid. These figures compare with a previous reference to Pemberton,[12] who reported an incidence of 0.4 per cent of carcinoma of the thyroid in 3,500 patients operated on for exophthalmic goiter. These figures are recorded in table 10 and confirm the impression that thyroid carcinoma is a rare disease.

Majorakis[17] in reviewing the literature reported that of 1,183 cases reported by 9 authors the mean 5-year survival for carcinoma of the thyroid was 37.1 per cent. Majorakis added 75 cases of his own, of whom 36.8 per cent survived 5 years. He also pointed out that only 20 per cent of these patients who had a preoperative diagnosis of thyroid cancer lived 5 years while 80 per cent of patients with the diagnosis made at surgery were alive 5 years later.

In so far as therapy is concerned, surgery is considered as the treatment of choice in the majority of cases of thyroid carcinoma. This is true in that early lesions are accessible and can often be removed *in toto*. In cases of metastases to the cervical lymph nodes most cases are also amenable to surgery. Thyroid cancer is usually fairly resistant to X-ray therapy. Radioiodine is considered as a possible therapeutic measure only if distant metastases or cervical metastases not removable by surgery are present.

TABLE 10

Incidence of Carcinoma in the Thyroid

	Sample	Incidence CA of Thyroid
Sokal[16]	122,000 cancer cases (all types)	0.56%
Pemberton[12]	3,500 cases "exophthalmic" goiter—surgical result	0.4%
U. S. Vital Statistics (1949)	206,000 cancer of all types—cause of death	0.4% cause of death
Alexander[13]	Hospital admissions (San Francisco): 3.4 new cases/yr./100,000 pop. At this rate, for the 16 yrs. I^{131} therapy has been used in thyroid toxicosis, the natural incidence of carcinoma of the thyroid should be 5.44 cases/10,000 pop. in treated group.	

The latter type of cases can be treated providing they demonstrate the ability to localize I^{131}. In order to give this form of isotope treatment a fair trial, however, one must first remove the thyroid gland, since as long as there is normally functioning thyroid tissue present it will remove the iodine from the blood stream in competition with the metastases. This is not always true, because a few functioning metastases have been demonstrated to pick up fairly large amounts of radioiodine even though there was normally functioning thyroid tissue present in the neck.

The thyroid may be ablated by surgery or by radioiodine. The latter method requires a time interval for destruction of the thyroid gland in the order of 12 weeks or more after a dose of 30 to 50 mc. is administered. At Bethesda Naval Hospital we recommend surgical ablation, if possible, because of this time factor and also to spare the patient the added total body radiation tissue damage by radioiodine extirpation. In the latter case the retained dose by the remaining normal thyroid tissue is much greater than the dose which would be retained by the functioning metastases when the latter are treated with I^{131}. Consequently the radiation tissue dose to adjacent neck structures is much higher.

There is a valid question as to whether the patient should lose the thyroid gland and then prove to have the type of malignancy that will not localize enough I^{131} for it to be an effective form of treatment. The pathologist should be a help here. If the pathologic tissue specimen of the metastases proves to be of the type that contains follicles and produces colloid, the chances are that it will localize I^{131}. This is not always true, but it is believed that if the patient has distant metastases of the pathologic type that is of differentiated, follicular, and functioning tissue he should be given the advantage of a trial at radioiodine therapy. This would entail removal of the remaining thyroid gland prior to treatment.

However, the pathologic features of the primary lesion in the thyroid gland may be misleading, and not too much credence can be placed in the pathologic diagnosis. It has been demonstrated that some primary carcinomas of the thyroid which have no I^{131} uptake whatsoever develop metastases demonstrating functioning qualities after ablation of the remainder of the thyroid gland. A case of carcinoma of the thyroid will be presented later in this paper which prior to thyroid ablation demonstrated little uptake in a cerebral metastasis and the primary lesion demonstrated no uptake by autoradiography. However, after surgical ablation of the thyroid gland the cerebral lesion demonstrated marked uptake and responded well to treatment with radioiodine. This probably indicated a metaplasia of the metastases to functioning thyroid tissue due to stimulation by the thyroid stimulating hormone of the pituitary.

From experience it is apparent that many times it will be necessary to ablate the thyroid and give the patient a trial of radioiodine therapy even though there is little hope of localization of an effective dose of the isotope. Occasionally, as in the above mentioned case, it may prove to be a life-saving procedure.

There is universal agreement that the number of cases of carcinoma of the thyroid which will demonstrate adequate radioiodine uptake by their distant metastases is 10 to 15 per cent. In the previously mentioned 1953 panel on the thyroid[3] Clark stated he had seen 100 cases of thyroid cancer and treated 15. Werner had also treated 15 per cent, while Miller and Rawson had treated about 10 per cent of all the cases they had seen. Kramer[18] reported he had studied I^{131} uptake in 48 cases and treated 12 of this number. Cunningham[19] treated 36 cases with radioiodine out of 60 cases considered. Both of these authors state that their cases are more or less selected in that the well-differentiated types of carcinoma that would be likely to localize iodine are referred to them for therapy. In general most investigators agree that 10 to 15 per cent of all carcinomas of the thyroid are of the type that should be treated with radioiodine. The types listed in pathologic terminologies as undifferentiated, small-cell, large-cell, solid papillary and Hürthle-cell are generally not benefited by this therapy (table 11). One often finds papillary carcinoma as listed responding to I^{131} therapy, but these are probably not the solid papillary type. Kramer[18] mentions a patient with Hürthle-cell carcinoma who demonstrated response by the disappearance of a mass in the neck and lived 4 years without further symptoms. I have seen a case of Hürthle-cell carcinoma of the primary thyroid lesion with metastases to the pelvis and have demonstrated definite iodine localization in the latter area; palliation resulted for a short time by means of I^{131} therapy. However, these cases are rare, and it would probably be best not to attempt their treatment with this isotope.

TABLE 11

Treatment of Carcinoma of the Thyroid with Radioiodine According to Pathologic Types

Responding to Treatment	Not Responding to Treatment
1. Follicular (alveolar)	1. Solid papillary
2. Mixed papillary	2. Small cell
3. Differentiated (functioning)	3. Large cell
	4. Hürthle cell
	5. Undifferentiated

Although a definite number of cases of functional thyroid metastases do demonstrate significant uptake, an effective dose of iodine cannot be localized in many. Clark, Werner, Rawson and Miller[3] reported improvement in 15 to 25 per cent of their treated cases. Kramer[18] noted improvement in about one-half of his selected cases, and McDermott[20] reported that in 6 cases there was a 1 plus response in 12 cases of treated follicular carcinoma of the thyroid (table 12).

TABLE 12

Treatment of Carcinoma of the Thyroid with Radioiodine

	Clinical Response of the Cases Treated
Clark[3] (Chicago) Werner[3] (New York) Rawson[3] (New York) Miller[3] (San Francisco)	15–25%
Kramer[18] (London)	50% (selected cases)
McDermott[20] (Boston)	50% (selected cases of follicular type)
Bethesda Naval Hospital	33% (selected cases)

Patients who respond to I^{131} are treated vigorously and over a long period of time. Thyroid carcinoma responds to radiation therapy like most other types of cancer, and the best response follows the initial course of treatment. In addition, some of the metastatic areas in the types of cancer responding to this form of therapy are destroyed as fast as they are treated. For these reasons the early doses will be followed by the best response and the greatest uptake of I^{131}, and both response and uptake will decrease as additional doses are given. The initial doses are rather large and range upward from 100 mc. (table 13).

Many investigators have used doses of over 100 mc., and Kramer[18] reports his largest single dose to be 230 mc. At Bethesda Naval Hospital our initial doses are in the range of 100 mc., and we have never administered a dose of I^{131} much higher than this.

TABLE 13

Treatment of Thyroid Carcinoma with Radioiodine

Dosage for Effective Treatment

Thyroid Ablation:	50 mc. (surgical ablation is preferable)
Initial Dose:	100–200 mc.
Subsequent Doses:	100 mc. q. 3 to 6 months until: 1. Metastasis disappears 2. Metastasis uptake is zero 3. Hematopoiesis is depressed
Total Dose:	Varies with above factors; usually 500–2,000 mc.

After the initial dose it is customary to wait about 10 to 12 weeks for reëvaluation of the patient before further therapy. As stated in the section concerning therapy in thyrotoxicosis this is the optimal time for beneficial results. This time interval may be shortened, however, since the effective half-life of radioiodine is much less (usually 2 to 3½ days) in thyroid cancer compared with the longer effective half-life (3½ to 10 days) in thyrotoxicosis. This difference of effective half-lives can be explained by the fact that in the benign thyrotoxic goiter the gland is overfunctioning and larger amounts of iodine are retained by the thyroid tissue than in the more slowly functioning metastases.

The therapist may discover after checking on the effective half-life of the isotope, which will vary somewhat in all patients, that the patient can be retreated in 6 to 8 weeks. Furthermore, the patient's condition may dictate a more rapid tempo of therapeutic doses. In either case earlier treatment should be carried out.

I usually treat thyroid metastases with repeated doses of 100 mc. of I^{131} at 10- to 14-week intervals until there is no uptake of the radioiodine or the patient exhibits a depression of his hematopoietic system. If the latter occurs prior to destruction of the metastases, or prior to a level of no uptake of iodine by the metastases, the patient is allowed to rest until the hemogram returns to normal.

The time involved in the above procedure may be extended into many months or years. The total dose administered to achieve favorable results may exceed 1 curie of I^{131}. Even after the patient's metastases exhibit no further iodine localization they should return at intervals of 3 to 6 months for reëxamination, X-ray films, and radioiodine tracer studies. If further metastases develop they are treated in the same manner as stated above. In a few instances metastases that were thought to be destroyed, or after treatment exhibited no further uptake, suddenly started localizing radioiodine again and could be treated with the radioisotope. After the first dose the patient may be rendered myxedematous and require thyroid therapy. A certain number, however, will not exhibit signs and symptoms of hypothyroidism and will not need thyroid for some time. This is probably due to the fact that the functioning thyroid metastases are producing adequate thyroid hormone for the individual. I have treated 1 patient with demonstrated pulmonary metastases that required no thyroid for 3 years after thyroid ablation. At that time he exhibited the first signs of a far-advanced hypothyroid state which coincided with the first time his chest roentgenogram demonstrated a clearing of the metastases.

If the patient is on thyroid and is to be retreated, he should be removed from the hormone 6 weeks prior to the administration of the radioiodine dose. If he is taking thyroid at the time the therapeutic dose is administered, the uptake of the radioiodine will be markedly decreased, and it will be relatively ineffective.

In patients with distant metastases who do not demonstrate I^{131} uptake several methods have been attempted to increase the uptake. These include larger doses of an antithyroid drug for several days followed by a therapy dose of I^{131} within 48 hours after the discontinuance of the antithyroid preparation. Reports as to results of this procedure vary, but as a rule it is not accepted as an adequate measure to increase the uptake of iodine in nonfunctioning thyroid metastases. Another measure is the administration of TSH (thyroid-stimulating hormone) daily for 3 days by the intramuscular route prior to administering the therapy dose. There are some favorable reports on this method, but on the whole it is not encouraging.

As a rule some metastases can be induced to demonstrate I^{131} localization by these measures, but the uptake so achieved is not great enough to be effective from a clinical standpoint.

The over-all results from I^{131} therapy of functioning metastases from carcinoma of the thyroid may appear more or less disappointing. Occasionally one achieves a dramatic result so that he retains his enthusiasm for this method of therapy. Such a case which has been referred to previously follows, demonstrating these interesting points:

1. No uptake in the primary lesion of the thyroid as shown by autoradiography.
2. Minimal I^{131} uptake in an intracranial metastasis prior to a thyroid ablation.
3. Marked growth of metastases and marked I^{131} uptake 3 weeks after thyroid ablation.
4. Favorable response to I^{131} therapy.
5. Five-year period required for therapy to date (total dose over 600 mc. and patient still demonstrating a functioning metastasis which will require further treatment).

Report of Case

A 37-year-old white woman underwent surgery in May of 1951 at the George Washington University Hospital for a rapidly growing mass lying over the right parietal region of the skull. The histologic diagnosis of a metastatic adenocarcinoma, possibly of thyroid origin, was pronounced following a biopsy of the mass. An I^{131} tracer study was performed at the Bethesda Naval Hospital and demonstrated a slight increase in iodine localization over the mass, compared with the contralateral parietal area.

In June of 1951 a total thyroidectomy was performed. About 3 weeks later she was again referred to the Bethesda Naval Hospital with a marked increase in the size of the mass. She had completely lost her vision, was partially deaf, and had evidence of an impaired vestibular mechanism. She was somewhat incoherent in her speech and tended toward emotional instability and irrationality.

Meanwhile the excised thyroid had revealed a small malignant nodule of the thyroid in which an autoradiographic study did not localize I^{131} (figure 3).

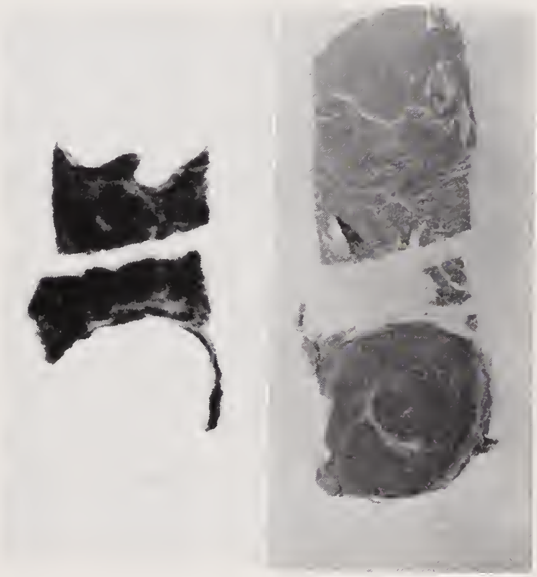


FIG. 3. Autoradiograph of thyroid specimen demonstrating no uptake of I^{131} in the malignant nodule at bottom of section on right.

A therapeutic dose of 60 mc. of I^{131} was administered on July 6, 1951, and on July 19 she was retreated with a dose of 94 mc. At this time the above symptoms had increased in severity and examination of the eyes revealed complete bilateral optic atrophy.

The patient was readmitted in September, 1951. She was totally blind but was recovering her sense of hearing and equilibrium and was improved in so far as her mental status was concerned.

During the first 24 months of observation the patient received 480 mc. of I^{131}, of which she retained 111 mc. 96 hours following oral administration. Retention was based on urine radio-assays. She had apparently recovered except for her loss of vision, cared for herself, and performed routine household duties. Her white blood cell count was below 4,000 for the first time since the original dose of iodine.

She was not seen again until May 1955, at which time she returned to Bethesda Naval Hospital for a follow-up study. She had no complaints. Tracer studies revealed a marked uptake in the cerebral metastases. A scintigram demonstrated the uptake to overlie the skull defect that was present 4 years earlier and had not healed (figure 4). Her hemogram was normal.

A therapeutic dose of 90 mc. of I^{131} was administered on July 25, 1955, and the 72-hour retention was 36 per cent based on urine radio-assay.

It is planned to continue the iodine therapy of this patient until the metastases refuse to localize more radioiodine or until her hemogram reveals bone marrow depression.

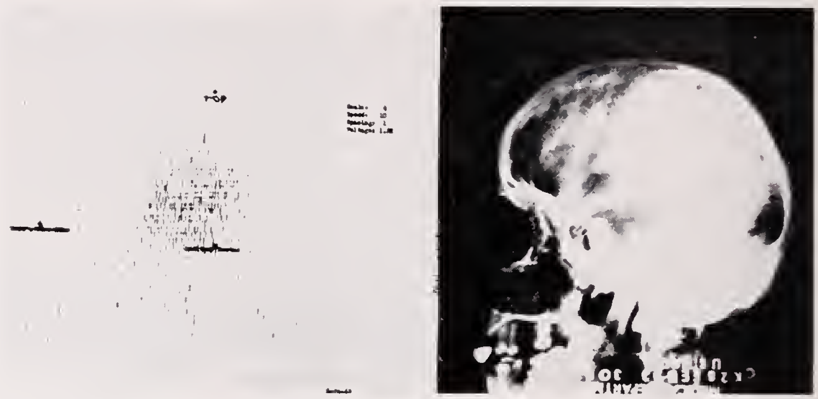


FIG. 4. Scintigram demonstrating marked uptake of a cerebral metastasis above and behind left orbit.

SUMMARY AND CONCLUSIONS

1. As a diagnostic agent radioiodine (I^{131}) is best utilized in thyroid function studies by (a) the 24-hour uptake of the thyroid gland and (b) the conversion ratio.

2. In certain cases such as borderline results between euthyroid-hyperthyroid, and especially euthyroid-hypothyroid, these tests are not adequate.

3. Radioiodine can be used as a tracer to locate and define certain substernal goiters and locate metastases from some carcinomas of the thyroid.

4. Thyrotoxicosis can be adequately managed by I^{131} therapy. Uniform results of 75 to 85 per cent of remissions in treated patients can be expected. References are given in which 3,500 cases of hyperthyroidism have been treated with this isotope.

5. I^{131} has not been universally used in the treatment of thyrotoxicosis in patients under 35 years of age because of fear of carcinogenic effects. References are given reporting the over-all incidence of carcinoma of the thyroid as 0.5 per cent in all cases of cancer. Four-tenths per cent of cases of exophthalmic goiter coming to surgery were found to have cancer of the thyroid. It is pointed out that there have been no reports of carcinoma of the thyroid developing in the 3,500 cases of hyperthyroidism listed in the references to this paper. Furthermore, of the thousands of other cases of hyperthyroidism treated with I^{131}, no cases of carcinoma of the thyroid have been reported to date.

6. In certain follicular-type carcinomas of the thyroid I^{131} may be demonstrated to be localized in distant metastases. These metastases may be treated with large doses of I^{131} following ablation of the thyroid gland. Surgery is usually the treatment of choice for primary carcinoma of the thyroid and for cerebral metastases.

BIBLIOGRAPHY

1. HERTZ, S., ROBERTS, A., AND EVANS, R. D.: Proc. Soc. Exper. Biol. & Med., 1938, **38,** 510.
2. HAMILTON, J. G.: Am. J. Physiol., 1938, **124,** 667.
3. MILLER, E. R., CLARK, D. E., RAWSON, R., AND WERNER, S., in Tr. Am. Goiter A., 1953. Springfield, Ill.: Thomas, 1954.
4. THODE, H. G., JAIMET, C. H., AND KIRKWOOD, S.: New England J. Med., 1954, **251,** 129.
5. KEATING, F. R., JR., POWER, M. H., BERKSON, J., AND HAINES, S. F.: J. Clin. Invest., 1947, **26,** 1138.
6. LARSSON, L. G.: Acta radiol., Stockh. Suppl. 126, 1955.
7. CHAPMAN, E. M., AND MALOOF, F.: Medicine, 1955, **34,** 261.
8. BALLS, K. F., AND OTHERS: Radiology, 1955, **64,** 858.
9. SEED, L., AND JAFFE, B.: Ibid., 1954, **63,** 551.
10. MCCULLAGH, E. P., AND RICHARDS, C. E.: A.M.A. Arch. Int. Med., 1951, **87,** 4.
11. SCOTT, W. G., AND OTHERS: Am. J. Roentgenol., 1951, **66,** 171.
12. PEMBERTON, J. D., JR., AND BLACK, B. N., in Tr. Am. Goiter A., 1948. Springfield, Ill.: Thomas, 1949.
13. ALEXANDER, M. J.: New England J. Med., 1955, **253,** 45.

(Continued on page 527)

AN OCCUPATIONAL AGENT (N-BUTYRALDOXIME) CAUSING REACTION TO ALCOHOL

WILLIAM LEWIS, M.D.

Clinical Instructor in Medicine, George Washington University School of Medicine

LOUIS SCHWARTZ, M.D.

Medical Director, United States Public Health Service (Retired)

AN UNUSUAL, unpleasant "reaction" following the ingestion of small amounts of alcohol was noted by us recently in a large printing company. The agent which is absorbed into the body and which "sensitizes" the printers is known as the antioxidant N-butyraldoxime. After such "sensitization" the response to alcohol consisted of a reddish, violescent, nonitching, coalescing, macular rash of the face, neck and upper trunk, congestion of the conjunctiva and nares, congestion of the mucous membranes of the throat which caused dyspnea without wheezing, and palpitation.

A similar type "reaction" was first noted by F. Koelsch[1] in 1914, in Germany, in cyanamid workers. In 1937 Williams[2] observed that rubber workers who manufactured Tuads (containing tetramethylthiuram disulfide) could not drink alcohol without having the same untoward "reaction." He suggested that Tuads may cause a distaste for alcohol and may contain an agent to "cure alcoholism." One of us (L.S.)[3] noted in 1939 the same findings in calcium cyanamid laborers.

It was not emphasized that this "reaction" would be of value in treating alcoholics until 1948. At this time 2 Danish physicians, Hald and Jacobsen,[4] observed this unusual type of "reaction" to alcohol while they were drinking at a party after they had consumed an experimental anthelmintic. This agent contained tetraethylthiuram disulfide (TETD), which was to be known as Antabuse (against abuse), since these physicians demonstrated that it caused an adverse response to alcohol. In fact, besides the above-described unpleasant "reaction," Macklin, Sokolow, et al[5] stated that the Antabuse-alcohol response can on rare occasions cause nausea, vomiting, cardiac changes, marked hypotension, prostration and death.

It has been reported by Fischer[6] that the consumption of a mushroom, *Coprinus atramentarius*, will cause this peculiar "reaction" to alcohol. Animal charcoal has also been mentioned as a "sensitizer," and may cause this type response.

It is thought that all of the above agents and perhaps other antioxidants may interfere with the oxidation of alcohol, causing an intermediate product of oxidation, acetaldehyde, to appear in increased concentration in the blood. Hald, Jacobsen, et al[4] postulated that the accumulation of acetaldehyde was due to increased production. Later it was thought that the increase in blood acetaldehyde was due to a decrease in the metabolism of this agent. Kjeldgaard[7] showed that tetraethylthiuram disulfide (TETD) acts as an enzyme poison inhibiting aldehyde oxidase in concentrations as small as 0.1 microgram per liter, thereby preventing oxidation of aldehyde to acids. Methylene blue prevents and reverses the TETD inhibition on aldehyde oxidase. Newman[8] found in dogs that an intravenous infusion of acetaldehyde produced a response similar to that occurring in the TETD alcohol "reaction" if the acetaldehyde level was 0.2 to 0.7 per mg. per cent in the blood. The normal acetaldehyde blood level in man is 22 to 37 gamma (microgram or

$\frac{1}{1000}$ milligram) per cent by the method of Stotz,[9] or 40 to 110 gamma per cent by the method of Burbridge.[10] The unusual "reaction" to alcohol was noted when the acetaldehyde level was increased 5 to 10 times above normal. However, our knowledge of the factors responsible for the TETD alcohol "reaction" is hampered because animals do not always show typical reactions but only an increase in blood acetaldehyde.

Antabuse is now well described in the N.N.R. 1955[11] and the text by Goodman and Gilman.[12] Hine, Burbridge et al[13] noted the effect of Antabuse (TETD) on blood acetaldehyde levels in 61 alcoholic patients. The mean normal acetaldehyde level for 10 untreated patients was 92 gamma per cent (±38). For 51 patients treated with Antabuse (1 Gm., 1 Gm., 0.75 Gm., 0.75 Gm., and 0. 5 Gm. on successive days), the acetaldehyde blood level was 281 gamma per cent (±187). This difference indicates that TETD has a definite effect on the normal reacting acetaldehyde. Twenty minutes after an ounce of alcohol was given, the peak mean acetaldehyde value was elevated approximately 400 gamma per cent (method of Burbridge) and the patients had the typical Antabuse-alcohol reaction.

The effects of tetraethylthiuram disulfide (TETD) alone are noted only in the occasional sensitive individual and may consist of acneform eruptions, allergic dermatitis, urticaria, lassitude, tremor, headache, and a garlic or metallic taste in the mouth.

We noted the effect of the antioxidant, N-butyraldoxime, on alcohol consumption in the process of solving a perplexing problem in a printing company. In November, 1955 the management of a large printing company received a signed complaint from the men on the second floor stating they developed unpleasant "reactions" if they drank alcoholic beverages. Actually the symptoms were first noted on January 1, 1953. One of us (W.L.) upon questioning the men learned that the symptoms sometimes arose within 10 minutes after consumption of as little as 6 ounces of beer. The severity of the "reaction," however, was directly proportional to the amount of alcohol consumed.

The men stated that their symptoms became more marked in the fall when the workrooms were heated and the windows were closed. They were less marked in the summer when the windows were open and the exhaust fans were running. The symptoms consisted of flushing of the face, red, nonitching blotches which coalesced, accompanied by dilatation of the scleral vessels, drowsiness, shortness of breath, and palpitation. Most of the workers on the second floor had stopped drinking because of these unpleasant effects. The symptoms occurred only among workers on the second floor, especially those working in the area of the color presses. No one on the first or third floors was affected.

The second floor was 1 large room, about 200 by 200 feet, employing altogether 240 workers. There were 22 printing presses in the room, divided into presses for black and presses for color. Each of the presses for black contained 12 rollers composed of Neoprene rubber, 60 inches long and 3½ inches in diameter. The color presses had about 40 rollers each, and the rollers were 60 inches long by about 5 inches in diameter. The rollers in the presses were washed 2 or 3 times a day. The washing solution consisted of a mixture of acetone and a volatile petroleum solvent (naphtha). The washing was done by colored men, using a cloth which they dipped into a large bucket of the solution, using their bare hands and wiping the ink off the Neoprene rollers and the plates.

On the color presses there was used a powder consisting of starch and about 0.15 per cent of sulfur. Over this powder there was a neon light and the powder dropped on the printed sheets as they rapidly passed under it. There was a distinct odor of ozone around this area.

It was noted that the rollers after being washed and allowed to stand for several days developed a tacky surface. Unused rollers that had not been washed did not develop this tacky surface. It was thought that the solvents used for removing the ink and the solvents in the ink itself were soaked up by the rubber and on standing evaporated out of the rubber, making the rubber on the surface tacky.

After speaking to random groups of the approximately 240 men on the second floor, all stated that they felt flushed and developed palpitation if they took a drink of an alcoholic beverage after work. They stated that the "reactions" lasted about 1 to 2 hours, but after a night's rest no symptoms remained. None of them could say whether this "reaction" occurred after they had not worked for 2 or 3 days and then drank alcohol. None of them had observed how long after exposure in the shop their peculiar susceptibility to drink lasted.

There had been no changes in the printing processes, nor in the supplies, during the last 3 years, except that in the past year the amount of anti-skinning compound (N-butyraldoxime), which they began to use in the ink approximately 3 years ago, had gradually been increased by about 2½ times the former amount. The last new addition of equipment was in 1949, and there had been no plant structural or ventilation changes since then.

Reactions to alcohol, as observed on the second floor, had occurred in the past among workers manufacturing tetramethylthiuram disulfide and tetraethylthiuram disulfide among workers making calcium cyanamid, among those eating the mushroom, *Coprinus atramentarius*, and among those ingesting animal charcoal. There was no calcium cyanamid in the shop. The workers had not eaten the above cited mushroom, nor had they eaten animal charcoal. That left as a possibility for the cause of their symptoms the tetramethylthiuram and the tetraethylthiuram disulfides, accelerators used in the manufacture of rubber.

In order to confirm the occurrence of the symptoms described by the workers, detailed examination and laboratory studies were made of 5 workers selected from the second floor. Among these, 4 complained of the "reactions" and 1 did not. The 1 who did not worked on the black and white presses. All 5 of the workers were moderate drinkers. After the first examinations were made the men were sent to a neighboring tavern and each had at least 1 glass of beer. The workers then returned to the office for further observation. Ten to 30 minutes after they had taken the beer the classical symptoms of the "reaction" appeared. In addition, there was an increase in the fullness and the rate of the pulse, but there was no change in the blood pressure. There was shortness of breath but no wheezing. There was dilatation of the scleral vessels, and the face and upper body appeared flushed. Physical examinations, and blood and urine tests made prior and after the ingestion of alcohol, including tests made on the following morning, failed to reveal any evidence of liver or kidney involvement or of any other disease. There was, however, an eosinophilia in the peripheral blood of from 3 to 9 per cent.

At this point in our investigations the data pointed to the thiuram disulfide as the most likely cause of the condition, but there remained the possibility that the latex (a copolymer of styrene and butadiene) in the paper, the powder containing sulfur and starch which was used on the presses, the ink (especially the yellow pigment), or the anti-skinning agent in the ink might be the cause. The following experiments were then performed in an effort to pinpoint the actual agent or agents causing the condition.

One of the workers, after he had been out of the plant for 20 hours, was taken to the office of one of us and was given a drink of whiskey. After one-half hour no symptoms were observed on this man. He was then given the second ounce of whiskey, and after another half-hour still no symptoms were observed. He was given a third ounce of whiskey, and when no symptoms were observed 2 hours after he had been given the first drink, it was concluded that after being away from work for 20 hours the effects of exposure in the shop had worn off. This conclusion was strengthened by the fact that this worker had previously given a "reaction" when he drank beer immediately after stopping work. It was also learned that for approximately 1 week before this experiment the ventilation in the plant had been increased in order to dilute the concentration of whatever there was in the air that caused the symptoms. It was also learned that since the ventilation had been increased some of the workers had taken alcohol and had failed to to develop the symptoms they developed before the ventilation was increased.

This worker was then sent back to the plant, and the management was told to stop the extra ventilation and expose the workers to the conditions in the shop which existed before the extra ventilation was turned on. After he had been working under these conditions for 4 days he was given 1½ ounces of whiskey immediately after work, and in less than ½ hour he developed the typical symptoms described previously. At the same time a second man working on the second floor and exposed to the same conditions was also given 1½ ounces of whiskey, and he developed exactly the same symptoms as did the first worker. Blood acetaldehyde and methemoglobin samples were taken from each of these 2 men before they were given the alcohol, and blood samples were taken after the "reaction" was established. The blood acetaldehyde was analyzed by the previously mentioned method of Stotz (normal 22 to 37 gamma per cent), and it was found that even before the alcohol was taken the acetaldehyde content of the blood was markedly increased (325 and 382 gamma per cent) but that after the alcohol was taken and the symptoms developed the acetaldehyde content of the blood was further markedly increased to 487 gamma per cent and 531 gamma per cent respectively. There was no methemoglobin detected.

This experiment definitely established the fact that exposure to the atmosphere on the second floor when the ventilation was inadequate caused these symptoms to develop if alcohol was taken soon after exposure.

There remained to be determined what in the atmosphere of the shop caused these symptoms to develop. Since such symptoms had been described as occurring among rubber workers whose product contained tetramethylthiuram and tetraethylthiuram disulfide and among people taking tetramethylthiuram disulfide (Antabuse) for the cure of alcoholism, the thiuram disulfide in the rubber rollers was suspected as the causative agent. Information obtained from the manufacturers of Neoprene showed that, while 2½ per cent of tetraethylthiuram disulfide was used in its manufacture, this chemical is completely combined with the Neoprene, none of it being in free form. Moreover, information received from the companies who manufactured the rubber rollers showed that neither of the companies added any more of the thiuram disulfides to the Neoprene which they purchased from its manufacturer. Information from the paper manufacturers showed that the latex sizing contained none of the thiuram disulfides. The paper was eliminated because workers on the first floor are exposed to it, and yet none of them complained of any symptoms. The sulfur in the powder used over the presses was inorganic and was thought to be innocuous.

As stated before, the only change in the printing process since the men complained of symptoms had been the use and the increase of the anti-skinning compound (N-butyraldoxime) in the inks. A visit to the ink company from which the ink used in the plant is purchased revealed that the amount of anti-skinning compound had been increased in the past year and a half up to about 2½ times. It was further revealed that some workers in this plant also had complained of symptoms similar to those described in the printing plant. Especially was this true of the workers mixing the yellow ink, in which there is a higher concentration of the anti-skinning compound, and in the mixing of which greater heat is generated, so that more of the anti-skinning compound evaporates into the air. (It was thought that the heat generated over the printing presses was at least as great as the heat generated in the mixing of the yellow ink.) One of the workers at the ink company who had been working there for about 4 months stated that he developed the same "reaction," especially after he had been working with the yellow ink. In order to verify this, immediately after work this man was given 1½ ounces of whiskey, and within one-half hour he developed typical symptoms. These facts pointed suspicion to the pigment and the anti-skinning compound. The pigment itself is a solid and does not evaporate into the air.

The anti-skinning compound is the antioxidant N-butyraldoxime, also known as butanal oxime, formula C_4H_8NOH. It is a colorless liquid, mol. wt. 87.12, b.p. 306° F, flash point 136° F, density 0.923. The manufacturers of the product stated that no such effect of this chemical was ever noted before.

In order to further ascertain that exposure to the grinding of the yellow ink caused this "reaction," the 2 workers from the printing plant previously tested were taken out of the plant for 24 hours in order to remove them from exposure to the causative agent in the atmosphere, and then they were given a drink of 12 ounces of beer. They did not develop the typical symptoms, which indicated that the effects of exposure had worn off. They were then sent to work at the printing ink company where they stayed for 5 hours in the operation of mixing yellow ink, over which is poured the anti-skinning compound. At this operation there is vigorous stirring of the yellow pigment, in which the temperature is said to go as high as 120° F, and there is a strong odor of the anti-skinning compound in the air. After 5½ hours' work over this operation the 2 test subjects were given 1½ ounces of whiskey each and they again developed the typical "reaction," namely, macular eruption which became confluent, flushing of the face, swelling of the nose, increase in the fullness and rapidity of the pulse, etc.

This experiment definitely proved that the yellow ink with the anti-skinning compound could produce these symptoms, but it was not yet known whether it was the anti-skinning compound alone, or the yellow pigment, or the other ingredients in the mixture constituting the ink.

Our next experiment was to see whether the Neoprene rubber rollers without the ink could cause the "reaction." Again, the 2 subjects were kept away from work for a day, given a test drink of 12 ounces of beer, and they again showed no "reaction." They were then put to work at cleaning a new unused Neoprene rubber roller in a small closed room in the basement. They used a clean cloth which they dipped with their bare hands into a bucket of a mixture of acetone and petroleum naphtha. They worked 5½ hours at this job, being exposed to the fumes of the acetone, the fumes of the naphtha, and whatever the solvent may have taken out of the Neoprene rollers. Immediately after they were given 1½ ounces of whiskey each and again they showed no "reaction." This experiment showed that neither the acetone, the naphtha, or anything in or taken out of the rubber caused this "reaction." The Neoprene rubber was further eliminated by the fact that examination and questioning of 2 men who worked in a separate room grinding the used rollers were daily exposed to the rubber dust coming off the rollers in the grinding operation, and they did not complain of any symptoms. One of these 2 men was an abstainer. The other was a moderate drinker.

The next experiment was to see whether it was the anti-skinning compound alone or any of the other compounds in the ink which caused the "reaction." Accordingly, the same 2 subjects, after having been away 2 days from exposure to the atmosphere of the second floor and from exposure to the grinding of the yellow ink with the anti-skinning compound, were placed in a small enclosed room of about 500 cubic feet in which ½ gallon of anti-skinning compound was poured into a basin and the basin immersed in water at a temperature of about 100° F so that some of it would evaporate into the room. In addition to this, a towel was soaked in the anti-skinning compound and hung on a rack in the same room to allow free evaporation of the compound into the atmosphere. The pulse rate and the blood pressure of the workers were taken before entering the room. The workers stayed in the room, playing cards and conversing between 9:30 a.m. and 12:30 p.m., a total of 3 hours, during which time they twice left the room for 2 or 3 minutes. The odor of the anti-skinning compound was strong in the room but not sufficiently strong to cause tearing, coughing, or gagging. At 12:30 p.m. the 2 subjects were taken out of the room and each was given ½ ounce of whiskey. This small amount was given in order to prevent too violent a "reaction." After 10 or 15 minutes there was very little "reaction" noted in the subjects, except perhaps a slight reddening of the ears and a beginning stuffiness of the nose. Another half-ounce of whiskey was given, and then the sides of the neck of 1 man commenced to show pink macules and his ears became redder. The other man then developed a reddened, swollen area on his cheeks. Both men looked as though they were beginning to get a typical "reaction," but it was not yet as strong as had been observed on them on previous occasions. Therefore, another half-ounce of whiskey was given to each, making a total of 1½ ounces of whiskey given to them in the course of an hour, and then they both began to develop marked "reactions"; i.e., their faces were red, the macules had coalesced, the ears were fiery red, the cheeks were red and swollen, and the nostrils were stopped up. They both looked toxic, as though they had a fever, and there was definite increase in the skin temperature of the face. There was no doubt that the subjects were showing a marked "reaction" similar to that which the men on the second floor complained of. This "reaction" developed after exposure to nothing but the anti-skinning compound and definitely established it as the cause of the "reaction" of which the workers complained.

SUMMARY

A new agent (N-butyraldoxime) was found to cause a peculiar "reaction" to alcohol, which is similar to, but milder than, the Antabuse-alcohol reaction.

The acetaldehyde blood level is elevated by the absorption of N-butyraldoxime, which is further markedly elevated shortly after the ingestion of alcohol and causes this unusual "reaction."

The effects of exposure to N-butyraldoxime largely disappear in 24 hours. There is apparently no permanent damage done to the body by the new agent.

A new "cure for alcoholism" may have been found.

(W. L.) 1726 M Street, N. W.
(L. S.) 915 19th Street, N. W.
Washington 6, D. C.

BIBLIOGRAPHY

1. Koelsch, F.: München med. Wchnschr., 1914, **61**, 1869.
2. Williams, J. J., in Queries and Minor Notes: J.A.M.A., 1937, **109**, 1472.
3. Schwartz, L., and Tulipan, L.: A Text-Book of Occupational Diseases of the Skin. Philadelphia: Lea, 1939.
4. Hald, J., and Jacobsen, E.: Lancet, 1948, **2**, 1001.
5. Macklin, E. A., Sokolow, M., Simon, A., and Schottstaedt, W.: J.A.M.A., 1951, **146**, 1377.
6. Fischer, I.: Svenska Läkartidn., 1945, **42**, 2513.
7. Kjeldgaard, N. O.: Acta pharmacol. et toxicol., 1949, **5**, 397.
8. Newman, H. W.: California Med., 1950, **73**, 137.
9. Stotz, E.: J. Biol. Chem., 1943, **148**, 585.
10. Burbridge, T. N., Hine, C. H., and Schick, A. F.: J. Lab. & Clin. Med., 1950, **35**, 983.
11. American Medical Association, Council on Pharmacy and Chemistry: New and Nonofficial Remedies, 1955. Philadelphia: Lippincott, 1955.
12. Goodman, L., and Gilman, A.: The Pharmaceutical Basis of Therapeutics, 2nd ed. New York: Macmillan, 1955.
13. Hine, C. H., and others: J. Clin. Invest., 1952, **31**, 317.

RITALIN—A NEW AGENT FOR MILD DEPRESSIONS*

A Preliminary Report

AVROHM JACOBSON, M.D.
Asbury Park, New Jersey

RITALIN,† a new central nervous system stimulant and antidepressant, which appears to be somewhat milder in action than the amphetamine drugs, was recently supplied to this investigator for a limited study in depressed patients.

In a recent study, Ferguson,[1] using Ritalin alone or in combination with reserpine (Serpasil), commented on the drug's effect as a "mental awakener" in negativistic patients and suggested further clinical trial. In a later study, Ferguson and Funderburk[2] used a combination of Ritalin and Serpasil to improve abnormal behavior in geriatric patients and found no contraindication for the use of either agent, alone or in combination. Here again, a "marked mental awakening of the patients to the degree that they were better able to participate . . ." was noted.

There were no abnormalities in the total blood picture. Nonprotein nitrogen values, cephalin flocculation tests, blood sugar levels and urinalyses, all were within normal limits for a geriatric group. According to the authors' summary[2] in the January 28, 1956 issue of the J.A.M.A., "The improvement in general was striking. Effects were sufficiently prompt to permit control of behavior by adjusting dosages and supplementing one drug with the other. . . . Neither advanced age nor cardiac disease was found to be a contraindication. The drugs not only reduced the burden of nursing care but also opened up possibilities of psychotherapy in some patients who had been confined for more than 40 years." Ferguson and Funderburk conclude that Ritalin and Serpasil are safe and effective despite age, length of illness, or abnormal physical conditions.

Pharmacologically, the Ritalin's action lies midway between caffeine and amphetamine, although chemically Ritalin, which is methylphenidylacetate hydrochloride, is unrelated to either of these preparations. Clinically, patients on Ritalin demonstrate an increase in alertness with a coördinated increase in physical or motor activity. In therapeutic dosage the drug does not produce hyperexcitability or mental letdown rebound, which are reasons for the frequent discontinuance of amphetamine preparations.

Meier et al[3] checked its effect on the rat, dog, mouse and rabbit, both for stimulation, survival and lethal dose. Schneider and Holden[4] have remarked upon the electroencephalographic effects in monkeys.

Numerous studies have shown no adverse effect on peripheral blood, urine, and liver and kidney function. The drug also showed a marked antagonism to certain depressants, i.e., diethylbarbituric acid, ethylphenylbarbituric acid, thiopental sodium, chloral hydrate, and urethane.

Such a preparation seemed to offer an opportunity in the treatment of the depressed patient, particularly when self-interest and preoccupation as well as slowing of thought processes block psychotherapeutic endeavors. Although electroconvulsive therapy has been a therapeutic tool of practical benefit on depressed patients, and especially the many who have suicidal feelings, or to interrupt the persistent depression that is unaffected by other technics, there are many more patients in the depressed category who do not seem to require such drastic therapeutic attack. When suicide is not a very pregnant risk, and when the patient can still be "reached" to some extent, a drug such as Ritalin could be of great aid. Certainly it was with this consideration that this study was undertaken.

---

* Presented at the 19th Annual Meeting of St. Elizabeths Medical Society in Washington, D. C., April 13, 1956.

† Supplied by Ciba Pharmaceutical Products, Inc., Summit, N. J.

This series included patients with either reactive or involutional depressions undergoing psychotherapy. All patients were in the fifth, sixth or seventh decades of life. They were all considered fair to good extramural risks, i.e., the suicidal risk being considered minimal. The therapy was psychoanalytically oriented and planned for limited goals in an office or clinic* setting; frequency of sessions ranged from 1 visit in 10 days to 3 visits per week. The total duration of therapy of the patients included in this study ranged from 3 weeks to 9 months, the average duration being 3 to 5 months. A total of 35 patients were seen; of this number 18 received Ritalin in doses ranging from 30 to 120 mg. daily; 17 received no Ritalin; a placebo was substituted (see table 1). Both groups were given but little information about the drug used except to be told that its essential function was an "aid in therapy."

Because a number of patients in the involutional age group had hypertensive cardiovascular disease, a physical survey was first completed on all patients, the services of several internists being utilized. Periodic physical checkups were made to measure what if any effect the Ritalin had upon blood pressure, pulse rate, hypertensive headache, etc. Alertness was maintained for complaints of palpitation or other increase in anxiety-like signs and symptoms.

TABLE 1

Summary of Ritalin Report

Diagnosis	No. of Patients	Daily Dose (mg.)	No. Weeks Treated	Response		Side-effects	Evidence of Habituation
				Poor	Favorable		
Involutional or reactive depressions* 5th, 6th, 7th decades	18	30–120	3–36	4	14	Occasional restlessness with higher dosage	None
Involutional or reactive depressions (controls)	17	0	12–36	9	8		
Fatigue (mild depression)	6	40–100	2–5	2	4	None	None
Serpasil, Thorazine (oversedation)	16	10–60	2–10	4	12	None	None
Schizophrenic reactions	6	30–60	3–8	6	0	Increased irritability and tension	None

* Include: 4 severe hypertensives; 1 diabetic plus hypertension.

The following 3 cases were representative of the response of patients in the Ritalin group:

Case 1. The patient was a 54-year-old housewife, referred for psychiatric treatment by her physician, who had become concerned with her change from a capable wife, mother and housekeeper to an ineffective member of the household over a 6-week period. Her clinical picture was one of constant fatigue, frequent tearfulness, inability to do her daily chores, withdrawal of interest from external things and situations, preoccupation with her despair, a feeling of hopelessness, self-condemnation, lack of the former fastidious attention to her own appearance and that of her home, and an indifference to her grown children and her husband.

The patient passively resisted psychologic investigation of her life experiences and personal background. She could only be drawn into hesitant and sparing talk about her indifference to food, her inability to sleep, her despair over the future, and her conviction that it was futile "to attempt to do anything," since there was no help for her. Her psychomotor retardation though evident was not pronounced.

---

* Henry Pollak Memorial Clinic, Monmouth Memorial Hospital, Long Branch, N. J.

Because of the difficulty in enlisting the patient's coöperation in psychotherapy it was decided to see if the use of Ritalin would overcome this difficulty. After 5 days of such therapy with doses of 30 mg. 3 times daily (upon arising, 3 hours later, and after lunch) the improvement in mood was marked enough to be favorably received by the family and by the patient herself. She began to eat, her sleep improved, and she became sufficiently alert to her surroundings and her future to engage coöperatively in her psychotherapy. She was seen on a thrice weekly basis over a 4-month period. Thereafter as improvement continued her visits were gradually cut down until her discharge from therapy at the end of the seventh month. It is now 6 months after the cessation of therapy, and her recovery has been maintained.

Case 2. The patient was a 62-year-old white man who had been active in the educational field and recently retired from a college where he had headed the Department of Sociology. He was referred for psychiatric treatment of a depression by his son, a psychiatrist, who wanted to avoid, if possible, hospitalization and/or electroshock therapy.

The patient was depressed, pessimistic about his future, believed himself a failure, felt unwanted, was guilty about his retirement, irritable, and unable to tolerate the slightest frustration without outbursts of anger, which always ended in tears followed by self-abasement, self-reproach, and complaints of being totally inadequate and worthless.

Morning was the worst part of the day. Typically he would waken in the early dawn, find it impossible to fall back to sleep, and then find himself weighted down with thoughts of his past mistakes and how they made certain his ultimate doom. There was no desire to get out of bed, to eat, or to read the morning paper. He would not speak with anyone until much later in the day. In the latter part of the afternoon he would rise and gradually busy himself with dressing and then could be coaxed into tasting some food.

Ritalin was begun in divided doses of 10 mg. every 2 hours from the time he awoke and gradually built up to 40 mg. every 3 hours until noon. The change evident within 4 days was significant enough to impress the patient with his upswing in mood. He entered more coöperatively into therapy (2 times weekly). An intense positive transference occurred. He began to feel wanted. His mistakes and errors were related and again related. Gradually he became more outgoing in his interests, and so therapy continued. He began to integrate his retirement and the change in outward status that went with it, together with his son's gradually increasing prestige and status. After the third month of therapy the Ritalin was reduced and by the fifth month discontinued. Psychotherapy continued for 2 months and then was terminated by mutual agreement. For the last 4 months the patient has maintained his recovery and invested himself in several local activities, most significantly as a counselor to a Golden Age group.

Case 3. The patient was a 67-year-old white, single woman who had been active as a social worker in a large city for a religious organization until the age of 65. She enjoyed the first year of retirement, moving to the East and living with a middle-aged niece who was a school teacher, for whom she kept house in a moderately sized apartment. During an extended weekend trip to New England she experienced severe headache, chest pain and twinges of nausea. Several physicians reassured her that it was only a severe hypertension that might well respond to the "newer snakeroot" medication. Medical therapy with several pharmaceutical preparations was begun. After an 8-week period the patient became depressed, tearful, and unable to attend to or even care about her daily duties. She was referred for psychotherapy.

The clinical picture was one of depression with considerable psychomotor retardation, despair, an indifference to her external environment, and considerable resistance to psychologic investigation.

Ritalin was started at 10 mg. thrice during the morning at 3-hour intervals and increased to 20 mg. at the same hours. She gradually became more interested in her surroundings and was quite grateful for "proof" that she could feel better and was not "beginning to die." Psychotherapy was then able to proceed in a more conventional manner. At this date she is still in superficial therapy after 4 months (bimonthly visits), continues on her Ritalin, and is able to carry on with her chores and daily activities. The medication with Rauwolfia preparations probably contributed significantly to the depression of this patient.

Of the 17 patients who did not receive Ritalin and were in the same general diagnostic category, 9 could not be "reached" by the usual channels of communication. They showed no significant response to the placebo. The placebo was continued for 4 weeks thrice daily, the patient being told it would aid in dissipating the depression.

No improvement whatsoever was observed after 1 to 3 months. Office interviews occurred twice weekly on the average. The 8 patients who demonstrated an improvement with psychotherapy received the placebo with the same instructions. The response in the placebo group was a little better than might be found in a larger group of patients.

Discussion

It appeared that patients on Ritalin undergoing psychotherapy for their depression improved more rapidly than those not receiving the drug. The effect of the drug appeared to be that of making the patient better able to coöperate with therapy. Increase in alertness, dissipation of early morning depression and fatigue, and a sense of well-being were found more often in the Ritalin group. So far no evidence of drug dependence has been encountered. In fact, toward the end of therapy in all but 6 cases we have been able to discontinue Ritalin altogether. In these 6, a maintenance dose of approximately $\frac{1}{2}$ to $\frac{2}{3}$ the effective therapeutic dose was an aid in controlling continuing but mild morning depressive episodes. No significant effect upon blood pressure or pulse rate was found. In patients with a prominent anxiety component the dosage of Ritalin had to be very small, 10 to 30 mg. daily in divided doses. In several instances the anxiety manifestations appeared to be intensified with Ritalin. When this occurred the drug was discontinued in the early phase of this study. In a smaller group of recent cases (16) Ritalin used in combination with one of the various tranquilizing agents, such as chlorpromazine, Serpasil or Miltown, seemed to be of benefit when there were anxiety features. It seems that the agitated, depressive patients in the fifth and sixth decades are benefited most by a combination of the tranquilizers and Ritalin.

The dosages most favorable were 20 mg. upon awakening, repeated every 3 hours for 3 doses. If agitation was prominent, one of the tranquilizers given before breakfast and lunch was found helpful.

Ritalin was found useful in neutralizing the depression occasionally found when Serpasil had been used for its hypotensive effect. This effect appears to be worthy of more intensive investigation.

To a rather limited extent Ritalin was used with schizophrenic reactions where apathy was a prominent feature. The results were not particularly rewarding.

The drug was also used in 6 patients who were referred for various reasons other than depression but in whom a depressive component was recognized. Generally anxiety was a prominent feature. In only 2 such cases was the drug thought to be an aid to psychotherapy by elevating the mood.

The use of Ritalin in such conditions as narcolepsy, epilepsy, postpartum depressions, and the various psychophysiologic disorders is worthy of investigation.

Summary

A preliminary study of the effect of Ritalin as a therapeutic aid in the treatment of depression showed that:

Patients undergoing psychotherapy for depression in the fifth, sixth, and seventh decades of life were able to coöperate more readily with Ritalin than with a placebo. Three case abstracts are presented.

Such patients early showed an increase in alertness, varying degrees of dissipation of morning depression and fatigue, often with a sense of well-being.

No evidence of drug dependence has been encountered to date with Ritalin, nor has significant adverse effect upon blood pressure or pulse been found. Therefore Ritalin may be used in hypertensive patients.

When anxiety was a prominent feature Ritalin usually intensified the anxiety symptoms.

(Continued on page 527)

PAIN IN OSTEOARTHRITIS—A WORKING HYPOTHESIS AS A BASIS FOR TREATMENT

JOHN McM. MENNELL, M.D.
Washington

THE DIAGNOSIS of osteoarthritis in clinical medicine is used too frequently to account for the symptoms of pain arising from joints, whereas osteoarthritis should be recognized as a painless structural change peculiar to synovial joints in response to unfair "wear and tear."

This must be the experience of all physicians who have treated painful joints in which osteoarthritic changes are present. That osteoarthritis is a painless change of synovial joints is suggested by the following simple example: A patient may present himself complaining of pain in a knee. The history of the pain may be that its onset followed a mild strain a few weeks previously and the symptom, instead of abating in a few days as the patient had hoped, has persisted. X-ray films are made and marked osteoarthritic changes are reported. It should be quite clear that severe joint changes characteristic of osteoarthritis cannot have appeared in the course of a few weeks. It should be equally clear that when the pain is relieved the changes revealed on X-ray examination will persist. The changes themselves, then, cannot be the primary cause of the symptom of pain.

Since empirical treatment is often successful in alleviating pain in osteoarthritic joints, there must be, in its wide variety, a common denominator in which lies the key to the true nature of the cause of pain and therefore a more logical and sure way of treatment.

The most frequent methods of treatment are (1) the prescription of some schedule of exercises to the muscles supporting the joint, (2) intra-articular injection of some drug or chemical, (3) other physical therapy which will include some form of heat, (4) some combination of the foregoing methods of treatment, (5) some reconstructive surgery, and (6) as a last resort, joint fusion.

If these approaches to therapy are analyzed, each of them is directed at doing something to the range of movement of the affected joint. The prescription of exercises is the most obvious. The prescription of fusion is equally obvious in its intent, namely, to destroy all movement at the joint.

Perhaps the most interesting or, should one say, confusing treatment, which often proves to be the most successful in relieving pain, is that of intra-articular injection of some drug or chemical. In this country hydrocortisone is most commonly used. Abroad, acid potassium phosfate with procaine, lactic acid with procaine, or air have been more commonly used. These substances have little in common with each other except the properties of either an analgesic or a cushioning effect. The larger amount of injection fluid used with lactic acid and acid potassium phosfate almost certainly stretches the joint capsule as well. There is no very logical reason why any one of these of itself should be permanently effective. In those instances in which it is, my thesis is that nature resolves some unrecognized impairment of the function of the joint through an accidental unguarded movement while the joint is thus made analgesic or is cushioned. This thesis is supported by the fact that good manipulative therapy will achieve

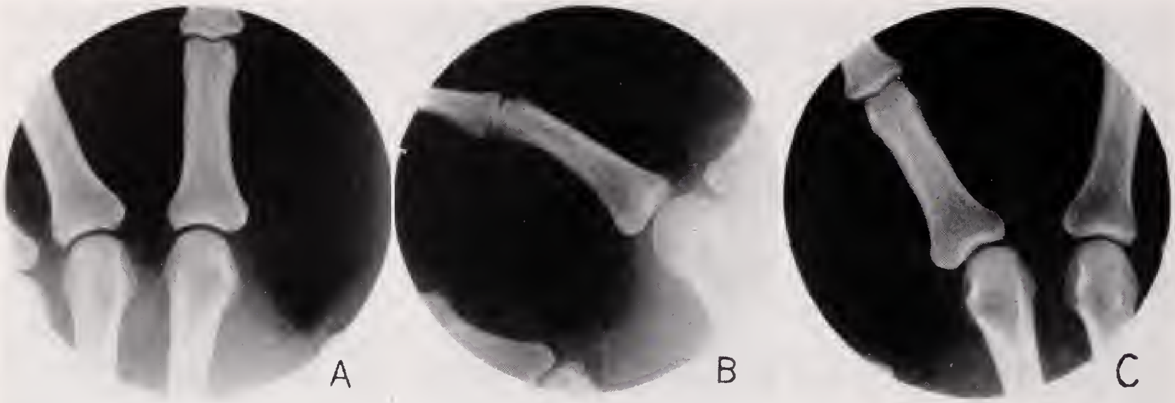


FIG. 1. (A) Metacarpophalangeal joint of index finger at rest, (B) in flexion, (C) in abduction. The relationship of articular surfaces of metacarpal bone and phalanx should be noted and compared with that in figures 2–5 which show opening up of joint space during performance of involuntary normal range of movement.

relief of pain more expeditiously and with more certainty.

Impairment of joint function, therefore, merits further investigation. Clearly it is the pain producer.

Impairment of joint function in the voluntary range of movement, next to pain, is the common presenting symptom and is quite obvious to the examining physician. This range of movement is described in conventional textbooks of anatomy. In clinical practice there can scarcely be anyone who at some time has not been confused when trying to explain loss of voluntary movement in a joint in which no joint or muscle disorder is demonstrable by usual clinicopathologic methods. It was just because of such cases that it was first suspected that there must be more to joint movement than the mechanisms commonly described, and experience has taught that this is so.

There is in all synovial joints a second range of movement, but these movements are not under the control of voluntary muscles, and I have called them the movements of "joint play." These movements in the involuntary range of movement are just as specific to any joint, but common to any joint of the same kind, as are any movements in the voluntary range of movement. However, more importantly, the performance of any movement in the voluntary range is entirely dependent on the integrity of one or more of the associated movements of joint play. If a movement in the range of joint play is lost or impaired, not only will there be a limitation of voluntary movement with pain, but voluntary movement can only readily be restored and the pain relieved after the restoration of the lost movement in the involuntary range. Because these movements are not under voluntary muscle control it is unreasonable to expect their restoration except by the application of some imparted mechanical force imposed deliberately by the use of controlled manipulative technics or fortuitously by some accidental, unguarded movement.

By joint manipulation I mean the restoration of movements in the range of joint play. Usually, once these movements are restored the muscles are able to put the joint through its normal range of voluntary movement without further assistance. To attempt to restore lost voluntary movement to a joint ignoring the movements o joint play only results in further trauma to the joint, more pain, and further impairment of its function.

An example of joint play should help to clarify this thesis. For this we should consider the most simple synovial joint which is available, one that is easily handled, one in which movement can be easily controlled, and one which may be clearly visualized radiologically. The second metacarpophalangeal joint most fully meets these requirements. At this joint there is a voluntary range of movement consisting of flexion, extension, abduction, adduction, and the composite movement of circumduction. The relationship of the articular surfaces of the head of the metacarpal bone and the proximal phalanx at rest and in two of these movements is demonstrated in figure 1. It should be noted that the radial relationship of the two articulating surfaces is very constant in movement and at rest. The range of movements of joint play at this joint consists of long-axis extension, an anteroposterior glide, side-bending to the right and left, and rotation. Each movement is attained by moving the phalangeal articulation on the stabilized articulation of the metacarpus. There is no stretching of the capsule, ligaments or surrounding muscle tendons; only the slack in them is taken up. Each movement is seen to open up the joint in some particular area. Figure 2 illustrates long-axis extension. The radial distance between the articulations is increased, and comparison of their relationship should be made with that when the joint is at rest, as shown in figure 1-A. Figure 3 shows the relationship of the articular surfaces at the limit of the movements anterior and posterior in the anteroposterior glide. The opening up of the "joint space" anteriorly and posteriorly should be noted and compared with the relative positions of these surfaces in flexion in figure 1-B. Figure 4 demonstrates the limit of movement of side-bending. This movement is not abduction, and comparison should be made with the positions of the articular surfaces in this figure and in figure 1-C. Figure 5 shows the relative positions of the articular surfaces in the movement of rotation of the base of the phalanx in a counterclockwise direction. The extent of this movement can best be appreciated when it is realized that the position of the stabilized head of the metacarpus is virtually the same as shown in figure 1-A, in which the joint is at rest.

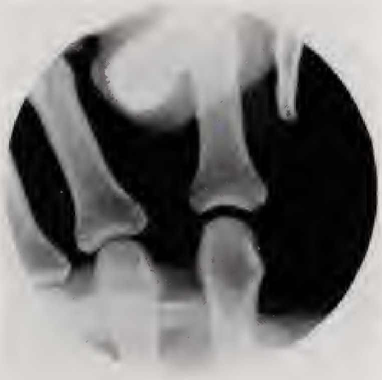


FIG. 2. Effect of opening up joint space of metacarpophalangeal joint of index finger by long-axis extension. Comparison with figure 1 reveals this to be a wide range of normal movement.

It will be realized that the extent of these movements is very small, especially when compared with the extent of the voluntary movements which depend on them. Because they are

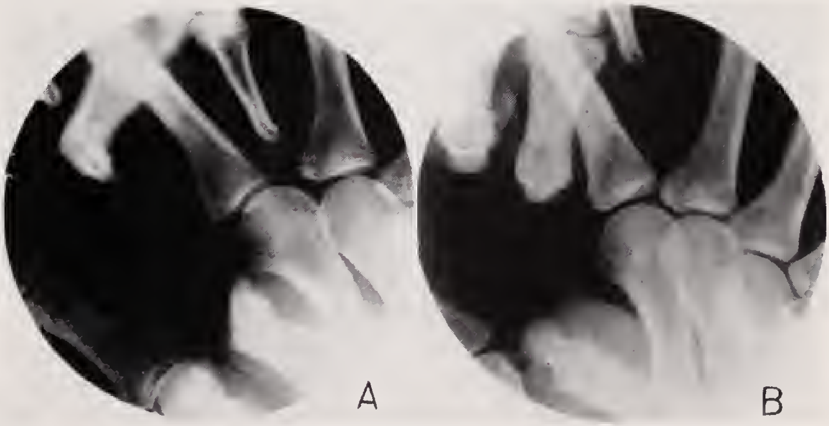


FIG. 3. Normal involuntary movement of anterior (A) and posterior (B) gliding at the metacarpophalangeal joint. Note position of base of phalanx in relation to head of metacarpal bone compared with relative positions in flexion (figure 1-B) when opening up of joint space will become apparent. In anteroposterior gliding the base of the phalanx is alternately pressed forward and backward on immobilized head of metacarpal bone alternately opening joint space in front and behind.

very small does not mean that their importance is not very great.

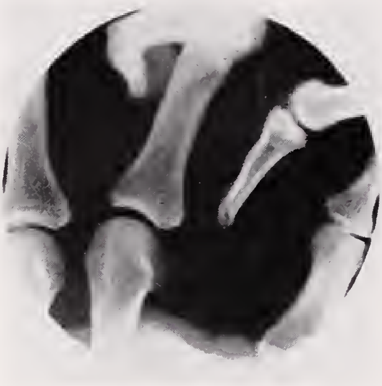


Fig. 4. Opening up of joint space of metacarpophalangeal joint of index finger medially by normal involuntary movement of side-bending laterally. Comparison with normal voluntary movement of abduction (figure 1-C) shows clearly line of articular surface of phalanx to be at an angle to articular surface of metacarpal bone instead of parallel to it.

Joint play movements can be demonstrated in all synovial joints of the limbs quite readily both clinically and radiologically. The extent of the movements is always small when compared with the extent of the related voluntary movements. If this is accepted, and experience teaches that it should be, then it is only logical to infer that the same situation will hold for any synovial joint in the body even though it may not be handled so readily or visualized so clearly, and it should not be difficult to accept when considering the 120 synovial joints which are present in the back. This thesis cannot be further developed here, but the range of joint play movements both in the limbs and the spine are well documented in the literature though they have never been stressed in any standard anatomy or orthopedic text.

A related phenomenon, the concept of a "joint-lock," must be taken into consideration together with this thesis that voluntary joint movement depends on the integrity of the movements of joint play. This concept postulates that two articular surfaces of a joint may bind together and produce loss of function without there being any demonstrable subluxation, dislocation or adhesions in the joint and whether osteoarthritic changes are present or not. An unguarded voluntary movement in a joint may easily produce an exaggeration of a movement in the involuntary range. This will produce an abnormal ligament stretch. Ligaments being extremely sensitive structures, even a very minor ligament stretch can be a very painful thing. The reflex reaction to such pain is muscle spasm. If this spasm is strong enough the joint can be immobilized by it. Unrelieved spasm initiates fatigue, which is productive of further spasm and more pain. Thus a joint-lock is produced and maintained until the vicious cycle of pain, spasm, fatigue, spasm and pain is broken by the restoration of the lost movements of joint play which once more allows the joint freely to move and be moved.

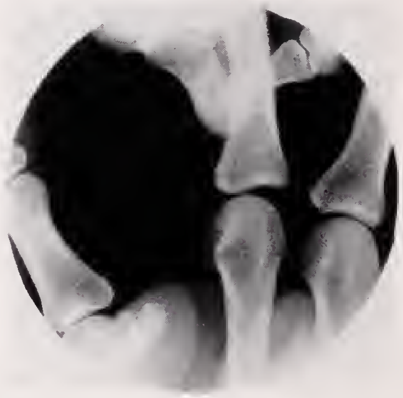


Fig. 5. Normal involuntary movement of rotation of base of phalanx on metacarpal bone at metacarpophalangeal joint of index finger. Rotation of base of phalanx is clearly appreciated when comparison is made with the relative positions of the articular surfaces of these bones at rest in figure 1-A.

An example in support of this thesis that joint surfaces can bind together even without an initiating unguarded movement may be found in the pain and stiffness experienced in normal joints which have been immobilized in plaster for any length of time. Pain in such joints will persist so long as stiffness persists in them. It is possible to relieve both these symptoms instantaneously by restoration of movement by joint manipulation and without any joint reaction.

Returning, then, to osteoarthritic joints, once pain in them has been relieved recurrences can be prevented by prophylactic measures. Pain in a joint produces spasm of its supporting muscles, and this spasm if prolonged will produce atrophy of them. An integral part of prophylactic treatment, then, is the redevelopment and reëducation of their muscular support. The quickest and most efficient way to achieve this is the prescription of exercise without weight-bearing, or, in non-weightbearing joints, without the strain of too early use. Too early return to the use of a recently painful joint without its being adequately supported by its controlling muscles can only risk an early recurrence of dysfunction through a fresh unguarded movement. Redevelopment of such atrophied muscles cannot be better achieved than by the use of hand-surged faradic stimulation preceding active exercises without weight-bearing, assisted if necessary but not resisted. The use of any current with an automatic surge is to be condemned, since automatism cannot vary with the refractory period of muscle and relaxation, and ignoring the physiology of muscle action can only produce fatigue in the muscle being treated, thereby retarding rather than accelerating its recovery. The joint should be adequately supported when function is first resumed. All exercise should be kept within the limit of pain. Here it must be reiterated and stressed that restoration of joint movement is a prerequisite to the reëducation of muscle, for freedom of muscle movement necessary to the development of muscle power demands that the joint which the muscle should move is free to be moved.

Then the affected joint must be protected from certain stresses of weightbearing which will otherwise accelerate the changes of normal wear and tear. Wear and tear denotes repetitive minor trauma. The hip and knee joints are usually the greatest sufferers. It should be a matter of some comment that the other weightbearing joints, namely, those of the feet and ankles and those of the spine, are less frequently affected though they carry just as heavy a load. This is surely because the load is better distributed in the feet and back by the multiplicity of joints in the feet and ankles and the additional shock-absorbing arrangement of the intervertebral discs in addition to the multiplicity of joints in the spine. In parenthesis it should be remembered that lipping of vertebral bodies, which is so often dubbed osteoarthritis, has, in fact, nothing to do with this condition at all. Osteoarthritis, being a change peculiar to synovial joints, can only appear in the interlaminar joints and the sacroiliac joints and the costovertebral joints in the spine. The non-weightbearing synovial joints of the limbs are affected by osteoarthritis but only following gross trauma or in certain occupations in which they are subjected to unusual repetitive trauma because of the nature of the work performed.

There is an optimum position in the design of joints in which the ill effects of weightbearing are minimal. Any deviation from this position will encourage articular changes, because wear and tear will be greater if the weight is borne by a part of the articular cartilage which was not designed to bear it.

Civilization with its customs and diseases has made it commonplace for humans early to lose the elasticity of their Achilles tendons. This frequently results in what we call an insufficiency of these tendons. This is evident to a greater or lesser degree by observing that position which the foot adopts at rest. When there is an insufficiency of the *tendo Achillis* and a concomitant loss of resilience of muscle because of the natural aging process, or enforced disuse at a younger age, an undue stretch is put on the calf muscles if the os calcis is to reach the ground before or at the same time as the heads of the metatarsal bones, as in walking or standing. In an attempt to compensate for this there is an attempt to hyperextend the knee joints, which results in an unnatural, constant backward bracing of them. The knee joints were not designed constantly to bear weight with their articular cartilages in contact in the braced position of the knee.

In an attempt to compensate for this and because of a loss of resilience in the thigh muscles and hip flexor muscles, there is a tendency for the hip joint to be held in a position of partial flexion. An unnatural weight-bearing aspect of the articular cartilages of the femoral head and acetabulum is then subjected to undue stress.

In an attempt to compensate for this the normal lumbar lordosis tends to flatten, a condition which in turn produces an unnatural postural strain on the synovial interlaminar joints of the lumbar spine.

Frequently the iliotibial bands also lose their elasticity, and in becoming short and taut they prevent the normal gliding movement of the greater trochanters of the femora beneath them. Instead, the greater trochanters carry the bands forward with them in walking, thereby instituting a constant rocking of the pelvis at the lumbosacral junction and an unnatural forward and backward torsion movement between the ilia and sacrum at the sacroiliac joints, not only producing traumatic osteoarthritic changes in these joints but by the stretching of their ligaments making the joints at the lumbosacral junction more prone to lock and the sacroiliac joints more prone to subluxation. It is likely, too, that the resulting abnormal stresses on the fourth and fifth lumbar discs resulting from such overmovement may well be sufficient to initiate disc pathology or even a frank prolapse.

These postural errors of weight-bearing produce stresses and strains such as those which a normal person experiences temporarily when he stands facing up an incline, i.e., when walking straight up a hill. Apart from the abnormal weight-bearing so induced it is noteworthy that the strain on the calf muscles under these circumstances which prevents adequate relaxation of them will sufficiently interfere with the circulation through them to produce the disabling symptoms of pseudointermittent claudication, a condition too often and tragically misdiagnosed as true intermittent claudication. The pain of the former condition is easily remedied by raising the heels of the patient's footwear.

In women who are accustomed to wearing too high heels the reverse stresses at the joints which we have been discussing will occur; the knees tend to be constantly flexed, the hips will be constantly hyperextended, and the lumbar lordosis will become exaggerated. In these cases there is a greater tendency for the involvement of the joints of the thoracic and cervical spines as well, because of an increase in the thoracic kyphosis and the cervical lordosis by compensating mechanisms.

Thus it will be seen that the prophylactic management of osteoarthritis from a musculoskeletal postural point of view starts with the footwear and feet of the patient and works upward.

Having relieved the pain in an osteoarthritic joint, having reëducated the supporting muscles of the involved joint, and having attempted to correct the postural stresses on the involved joint to the best of one's ability, there still remain 4 problems of management of the patient which are just as important as anything else.

The first problem, which is usually the most obvious one, is the maintenance of the body weight to that which the damaged joints may be expected to bear without further undue wear and tear. In this respect I believe that there is some relation in water balance to osteoarthritis, although I am not prepared to speculate on its nature. However, it has been my experience that patients who suffer from persistently painful osteoarthritic joints invariably are deficient in their daily fluid intake.

The second problem is to attempt to avoid the development of any focus of infection which may become the cause of a low-grade infection in the osteoarthritic joint, or to eradicate any focus of infection which may be present. While accepting that there are two schools of thought in regard to the part played by focal infection in the symptoms of osteoarthritis, it is my experience that symptoms persist in the presence of a focus of infection until it is eradicated. I would not suggest that a focus of infection can primarily produce symptoms in an osteoarthritic joint.

The third problem which should be faced is the removal of the patient from a causative occupational hazard and, if necessary, the institution of vocational rehabilitation. There are remarkable facilities available in this country about which too little is known even by some of the agencies which are set up to deal with these problems.

The fourth problem which confronts us in the management of the patient is to persuade him sufficiently to rest his already damaged joint each and every day, and yet maintain the integrity of his muscles.

Osteoarthritis, then, except in its grossest forms, is a painless change which occurs in synovial joints because of specific major or repetitive minor traumata to them. Pain in an osteoarthritic joint arises from a loss of one or more movements in the normal range of movement which is not under the control of voluntary muscle action, and in this regard I postulate the existence of a specific range of movement at every synovial joint in the body, which I have called the range of movement of joint play. Pain in these joints can be relieved by the restoration of this lost movement by joint manipulation, and I suggest that, when manipulation is not used, success in treatment for the relief of pain will occur only with the fortuitous intervention of nature providing an accidental manipulative stress, while analgesia or cushioning is produced in the joint by other nonspecific methods of treatment, or, if analgesia is not practiced, by unnecessary painful and traumatic treatment or accident. Such a joint may be kept symptom-free by maintaining the integrity of its supporting musculature and by prophylactic attention to the mechanics of weight-bearing, not only at the involved joint but in all related weight-bearing joints. In addition, attention to the amount of weight to be borne and a prescription of adequate rest must be given besides attention to and the correction of acquired postural anomalies.

Although this thesis may have its practical limitations, it emphasizes the importance of assessing the patient as a whole rather than dissecting him into parts, which is an unfortunate tendency in the clinical practice of medicine today.

Osteoarthritis too often is a poor excuse for a diagnosis of the cause of pain and an even poorer one for the prescription of empirical treatment, since, even though the treatment for pain in an osteoarthritic joint may be successful, the osteoarthritic changes persist. These changes, therefore, can play little if any part in the production of symptoms until they are so gross that destruction of the joint by fusion offers the only chance of relieving the pain; it should be possible to prevent this end-result.

SUMMARY

The cause of pain in osteoarthritis is considered. It is postulated that pain does not arise from the osteoarthritic changes themselves except in their grossest form.

As a cause of pain, a well documented but little recognized entity, namely, the loss of movements in the range of joint play, a range of movements not under voluntary muscle control but present in every synovial joint in the body, is offered. Clinical evidence which suggests this is discussed, particularly the fact that many empirical forms of treatment which have little in common with each other pharmacologically, physically or chemically may relieve the pain without altering the joint changes.

As a logical sequitur, the treatment of painful osteoarthritic joints by manipulation is advocated, adequate differential diagnosis and the knowledge of good manipulative technics being prerequisite to this. I have been accustomed to using a combination of therapies: (1) Injecting

(*Continued on page 528*)

President's Page

VACATION DAYS ARE OVER

It was only a few years ago that most people in Washington looked forward to the suspension of many of their more arduous labors during the notoriously hot summer months. However, times have changed. Air conditioning has made it possible for indoor workers to carry on very much as usual. This applies to the Medical Society headquarters, for example, which, except for vacation, carries on its routine operations without interruption.

In mid-August, when these lines are written, the Committee on Medical Care has for several weeks wrestled with Dependent Medical Care problems. Congress has recently enacted a law providing that medical services shall be furnished dependents of those serving with the Armed Forces either as military or civilian personnel. Because of the implications of the new law for the medical profession, the Committee is giving it careful consideration before making recommendations to the Medical Society.

The chairmen of a number of committees have also been busy discussing preliminary plans for early autumn with officers of this Society. In this group have been the chairmen of Public Health, Public Information, Professional Liability Insurance, and House Committees.

The Executive Board and the Board of Censors, as usual, hold monthly meetings. Invariably they are lengthy and often wearying. Despite this, members of the Boards are exceedingly faithful in their attendance.

The Society's program will, of course, not be in full swing until sometime in September, when several committees now inactive will get under way. The headquarters staff will then begin to step up its efforts to keep pace with the varied activities of the Society.

Too few members, in my opinion, know what goes on at the headquarters of its organization. Efforts will be made shortly to visualize these for the membership. In addition to luncheons for old and new members, which are planned for the coming year, there will be a news sheet published and a descriptive folder distributed in which the facts about the Society will be presented in a readable and interesting manner.

It is only too true that only an informed membership can give intelligent and adequate support to the Society's policies.

Ralph M. Caulk

Editorials

THE COST OF MEDICAL EDUCATION

In 1955 the average cost for the teaching of medical students in the United States was $3,657 per student per year. This figure is derived from data made available late in December 1955 by the National Fund for Medical Education.

Such figures must be seriously challenged. Do they actually represent the cost of medical education or do they include other expenses of the medical schools, such as the cost of medical research, medical care, and public service? These are necessarily a part of a virile medical school, and to some extent are essential to the training of medical students, but, since these activities serve other purposes as well, their cost should be apportioned.

Research in our medical schools currently receives its chief support from Government, special fund-raising agencies, foundations, and industry. Grants from these sources cover the direct cost of the research but make inadequate provision for the indirect costs. Weaver[1] has calculated that indirect costs incident to the conduct of research may amount to 46 per cent of the direct costs. These expenses, which are over and above the value of the research grants received, must be borne by the universities. Since these expenses—for supervision of research, clerical services, laundry, etc.—cannot be separated from other departmental expenses, they are usually assigned to medical education generally.

Medical research provides potential benefits to all mankind, not just to medical schools and medical students. The full cost, both direct and indirect, of medical research should be met by public funds. This is probably the proper area for the Federal support of medical education. The benefits could be large, and the dangers should be minimal.

Modern clinical instruction calls for small student groups, each with its own instructor and its own patients. These units not only function for the training of medical students but also render medical service to the indigent of the community. Members of the full-time staff of the medical schools and their administrative assistants make substantial contributions of time for this service, both in the matter of organization of the units and in direct attention to the medical needs of ambulatory and bed patients. These costs are currently assigned to medical education.

These services are obviously essential to the training of medical students, but since the local community also derives substantial benefit, the costs should be apportioned. Local or state governments should meet the full expense of medical care of the indigent through local taxation, leaving to the medical schools only those expenses which are properly related to instruction.

(The expenses for medical service referred to in the preceding paragraphs would be much larger than they actually are at present if it were not for the contributions made by the part-time teachers in the medical schools. These practicing physicians, serving without compensation, devote a number of hours each week to the instruction of medical students. Teaching hospitals also make a real contribution in the maintenance of facilities for student instruction, largely at their own expense.)

---

[1] Weaver, H. M.: A proposal for defraying the cost of conducting programs of research. J. M. Educ., 1952. **27**, 316.

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia.

But there is an even broader aspect of regional and national service rendered by the medical schools, and little or no attempt has been made to evaluate its cost in dollars and cents. This consists of executive, consultative, and advisory services to public and semi-public agencies, both governmental and professional. There is hardly a medical school that does not have on its staff a number of senior faculty members serving as officers of important national and specialty societies, members of examining boards, editors of scientific journals, consultants to research groups, or to officials of Government, etc. Many schools provide offices, at much less than their cost, for the conduct of these activities. University officials and faculty members are proud to render such service and consider this a normal and proper part of the university's contribution to society. However, since work of this type may require extensive absence from the university, it often becomes necessary to appoint other staff members to carry on the normal functions of the absent senior teacher. Thus an additional expense is assigned to medical education, although the instruction often actually suffers from the substitutions.

It is for the support of public service that endowment funds and gifts from foundations seem most appropriately applied. Unfortunately, most schools have little money that they can count on regularly from these sources.

Certainly a careful analysis and assignment of costs of medical research, medical care and public service along the lines suggested would reveal that current estimates of the cost of training medical students are excessively high. It is likely, however, that it is still the most expensive form of professional education, even when due allowances are made.

Perhaps such an analysis, carefully made and convincingly presented in the proper places, may provide additional support for our medical schools and an answer to the current plight of medical education.

T. M. P.

A LOOK AT THE RECORD

In addition to the health and medical bills passed solely for the District of Columbia, 3 bills of major significance to the entire medical profession were enacted by the 84th Congress: a program for payments to the disabled at age 50 under Social Security, a broader plan for the medical care of military dependents, and an arrangement under which the Federal Government will make construction grants to institutions doing health research.

For those doctors living in the Washington area 2 other national legislative measures also are of importance: establishment of a National Library of Medicine and salary increases for military and Public Health Service physicians willing to stay on active duty beyond the draft requirement.

The arrangement for Old Age and Survivors Insurance payments to the disabled after they reach age 50 was enacted over the strenuous objections of scores of representatives of the medical profession, many of whom came from as far away as the West Coast to testify before the Senate Finance Committee.

The doctors mainly argued that disability certifications would be unfortunate for 2 medical reasons. First, most determinations of medical disability are difficult to arrive at and some virtually defy definitive diagnosis. Second, disability payments would have a disastrous effect on the will-to-get-well of many handicapped persons, and it would withdraw from the labor force countless thousands of workers who now maintain their own independence despite physical handicaps.

Other objections also were raised, particularly regarding the dangers of attaching a medical program to Social Security, which up until now has been a retirement plan based on the easily ascertainable factor of age. Spokesmen for the Eisenhower administration put their emphasis on the risk involved and the additional tax that will be imposed to finance the plan.

On the other side, most proponents centered their arguments on the "right" of an individual who has paid into the OASI fund to protection in case he becomes disabled before reaching the retirement age of 65.

In the final showdown in the Senate the disability payments amendment carried by the narrowest of margins—one shifted vote would have meant defeat for the proposal.

The same procedure that has been in effect under the 2-year-old "disability freeze" program will be used to arrive at medical determinations of disability for pension purposes. The only difference is that the worker will get his pension at age 50 if certified as disabled instead of waiting until age 65.

In passing the dependent medical care bill, the Congress left unsolved some of the problems that a Defense Department task force now is attempting to work out. For example, while the new law allows the Secretary of Defense to deny Government-paid private hospital and medical care to some service families, it isn't much more specific than that. In leaving the Secretary this latitude Congress had 2 objectives. It wanted to insure that no military medical facilities would go unused while at the same time the Government was paying for the medical care of service families in the area. It also wanted to protect the professional standards of the medical corps by supplying the doctors with a "broad spectrum" of patients.

Another problem left to the administrators is selection of the method or methods for furnishing private medical care to dependents. Defense Department can contract for indemnity plans, Blue Shield, medical society plans, or hometown care similar to the system used by the Veterans Administration; or—and a more likely course—the Department may utilize a combination of coverage. The law calls for the Department to have the program under way by December 8.

Medical school deans generally regard the grants for building research facilities as a step in the right direction, but not a long enough step. Their views are shared by President Eisenhower, who, when approving the bill, said it was deficient in 2 respects. "It fails to provide assistance, as recommended by the administration, for construction of facilities for training of medical scientists," he said, "and in the light of these needs the amounts authorized are inadequate."

"Although the funds for research facilities will be extremely helpful, we should extend the assistance to include the laboratories where future health research personnel are being developed," the President continued. "In medical and dental schools, space for research and teaching functions are so closely interrelated with one another that no clear line can be drawn between them."

The President's attitude is another indication that the bill for construction grants to schools to build teaching facilities will be an important subject for the next Congress.

In another action in the medical training field Congress approved grants for the training of a variety of personnel: advanced training for professional personnel in Public Health and for graduate nurses, and earmarked funds for training practical nurses through the U.S. Office of Education. The same bill extends the Hill-Burton hospital construction program for 2 years (until July 1, 1959) and provides grants for mental health studies.

The bill to make a National Library of Medicine out of the Armed Forces Medical Library ran into some trouble toward the close of the session, when an effort was made to specify Chicago rather than Washington as the location. The compromise adopted leaves selection of the location to the Library's Board of Trustees; because military and Government medicine are strongly represented on this body, eventual selection of Washington is anticipated.

The military-Public Health Service pay raise bill is a part of a general movement to make military careers more attractive for high quality personnel. It offers a $50 per month raise to physicians and dentists staying beyond 2 years, another $50 after 6 years, and a third $50 after 10 years, all in addition to the present extra $100 per month equalization pay.

Other actions in the health field: authorization for the President to give Public Health Service military status in time of national emergency (previously permitted only in time of war), authorization for the commissioning of osteopaths as medical officers in the military services, authorization for a continuing national health and medical care survey, a water pollution control program (half a billion dollars over 10 years), and a new mental health program for Alaska, with the Federal Government paying initial costs.

THOMAS H. ALPHIN, M.D.
Director, Washington Office of
American Medical Association

"BREAD UPON THE WATERS"

There are several reasons why physicians should contribute to the American Medical Education Foundation. An understanding of what the A.M.E.F. is will make these reasons apparent.

The National Fund for Medical Education was created by Dr. Conant and President Eisenhower, when the latter was President of Columbia University. Its purpose was to obtain funds from corporations and other large groups to aid in the support of our medical schools. It was hoped thereby to circumvent direct Government subsidization of the schools.

The AMA established the A.M.E.F. as a parallel group to promote an organized method of giving, by physicians, to the same cause. It was hoped that this would operate as a pump-priming device for the National Fund. At the end of each year the collections of the A.M.E.F. are lumped with those of the National Fund, and then distributed to the medical schools. The goal of this joint effort is to raise 10 million dollars annually, 8 million from the National Fund and 2 million from the A.M.E.F.

There is no confllict between the A.M.E.F. and the alumni associations. If a man makes a contribution to his school directly, he fulfills his obligation, although the A.M.E.F. cannot take cognizance of that money. If, however, that money is given to the A.M.E.F., the contributor may designate the school that he wishes to receive it. It will then be forwarded intact to that school, and the A.M.E.F. can also be credited. In addition to this method of disbursement, funds which are not earmarked for a specific school are distributed in 3 ways. These are as follows:

A Grant: a sum of money divided equally among all the schools.

B Grant: a sum of money distributed among the schools in amounts based upon the enrollment of the schools.

C Grant: a sum of money distributed to various schools for a particular purpose. No money has yet been allotted through this channel.

How effective has this program been in stimulating contributions? A ready answer was provided by an announcement on April 15 by the Ford Foundation of a 10-million-dollar program of matching grants. These grants will be paid to the National Fund on a sliding scale, based upon its collections in the past and in the future. Thus a contribution to the A.M.E.F. is indeed "bread upon the waters."

How well are Washington physicians supporting their medical schools? In 1955, 105 members of the D.C. Medical Society contributed to the A.M.E.F.; 309 additional physicians contributed directly to the schools; in all, 414 Washington physicians made contributions to the medical schools. Surely, many more physicians than this recognize an obligation to their schools and the value to themselves of continuing top-flight medical education.

JAMES EDWARD FITZGERALD, M.D.
Chairman, Committee on Medical Education Fund

In and Out of Focus

BY THE OBSERVER

H.R. 7225 Becomes Law

Over the strenuous opposition of the American Medical Association, its constituent state medical societies, and allied groups, Congress passed the controversial Social Security Bill H.R. 7225 on July 17. Some two weeks later, President Eisenhower signed the bill, despite vigorous last-minute protests.

Now that this legislation is law, its principal features will be of interest to readers of this column, for some of its provisions have a special significance for physicians. Here are its essentials, set forth as briefly as possible:

Coverage. The law provides for:

Coverage of several groups excluded under the present law, i.e., lawyers, dentists, optometrists, osteopaths, veterinarians, and others. Actually, it includes all groups except doctors of medicine, Christian Science practitioners, and Government workers;

Payment for total disability at the age of 50 and for children permanently disabled before the age of 18;

Payments to widows and surviving dependent mothers at the age of 62, effective November 1956. Working women and wives will be given reduced benefits, 80 per cent and 75 per cent respectively, at the age of 62.

Financing: Social Security payroll taxes will be increased, effective January 1, 1957, by $\frac{1}{4}$ per cent for both the employee and employer, making a payment of $2\frac{1}{4}$ per cent by each. The present rate is 2 per cent each. The tax for self-employed persons will be increased from 3 to $3\frac{3}{8}$ per cent, effective January 1, 1957.

Public Assistance: The Federal Government's contribution to old-age assistance to the blind, to the totally and permanently disabled, and to dependent children is increased. These funds are only available to states on a matching basis, the Federal Government contributing a substantial share.

Medical Care: A new program will be added whereby the Federal Government will match, on a 50-50 basis, state expenditures in behalf of public assistance recipients needing medical care up to a maximum determined by multiplying $6.00 per month times the number of adults and $3.00 per month times the number of children.

Training Grants for Public Assistance Personnel: Five million dollars will be authorized for the fiscal year 1957 for allotment to states on a variable basis to pay to institutions of higher learning for the training of public welfare personnel, etc. The Federal share will be 80 per cent.

Child Welfare Programs: The authorization for child welfare programs will be increased from 10 to 12 million dollars a year.

In a statement at the ceremonies attending the signing of the bill, President Eisenhower said:

"Although there were differences of opinion over separate provisions, the final legislation was approved overwhelmingly by Congress. In signing this legislation, I am hopeful that this new law, on the whole, will advance the economic security of the American people."

There is no denying the fact that this is a bitter pill for organized medicine, which tirelessly fought this legislation. The AMA had taken the position that there should be a complete reëvaluation of the Social Security scheme before benefits were broadened. Strenuous objections were raised to physicians' being required to certify to the physical condition of those entitled to disability benefits under the law. Experience in other countries, it was argued, had demonstrated conclusively that this could lead only to malingering and deceit. Then, too, the Association was wary of the physicians' services being tied to the Social Security program, it being looked upon as an opening wedge to "socialized medicine."

Neither the Congress nor the President were convinced of the validity of these arguments. They were obviously of the belief that public opinion favored extension of Social Security benefits.

Now that H.R. 7225 is law, doctors, like other good citizens, will coöperate to make it effective, in the hope that whatever defects become apparent will be remedied by future Congresses.

★

A Difficult Assignment

A medical organization is continually plagued by the necessity of remaining flexible enough to cope with problems arising in a rapidly changing society. If these problems are to be promptly and adequately met, frequent reappraisals of the organizational structure, and especially the legal instrument under which it operates, its constitution and by-laws, are essential. Too often, this document is so outdated that, unless its provisions are ignored, effective operation is impossible.

Our Society's experience in this regard is not unique. Its present Constitution and By-laws was adopted in 1939, the one preceding it having been in effect for many years. The latter document had been amended so many times and in such desultory fashion as to utterly confound the reader.

The late Dr. John Benjamin Nichols, an experienced and able parliamentarian, was the author of the current Constitution and By-laws. He labored diligently to make it explicit and elastic enough to meet whatever conditions might arise in the future. But, as is always the case with such documents, unforeseen situations arose, requiring amendments. These now number 30, which underscores the statement previously made that no perfect document of this kind can be devised. Reappraisal and revision are the only assurance that the organization will have an up-to-date guide for the conduct of its affairs.

This task, that is, the reappraisal and revision of the Society's Constitution and By-laws, will come within the scope of the Study Commission on Reorganization created by the Society at a business meeting last March. Whatever its recommendations, and it will undoubtedly have several to offer, these must be implemented by the adoption of a new instrument under which the Society can operate efficiently.* Its preparation will be a laborious and often onerous task, with little reward except the satisfaction of having made an important contribution to the Society's welfare.

Some questions to which the Commission will undoubtedly seek an answer are: What changes in the Society's operation are required to meet problems arising out of the increase in population in the District of Columbia, both medical and general? Can the organization procedure be improved to make it more responsive to the wishes of the membership? Is it possible to bring about a closer relationship between the Society and its members, which now number some 2,000? Should the organization year be changed to coincide with the calendar year? Sould an amendment to the Society's Charter, granted by Congress, be sought in an effort to broaden its powers?

---

* A considerable amount of work had already been done on the revision of the Constitution and By-laws, prior to the appointment of the Commission, by a Special Committee on Revision of Constitution and By-laws, which had previously been created by the Executive Board. The groundwork laid by this Committee will prove of considerable value to the Study Commission. Members of the Committee were: Dr. Harry Zehner, Chairman, and Drs. William M. Ballinger and Raymond T. Holden.

These and many other questions the Commission will undoubtedly consider. The personnel of the Commission give assurance that this task will be intelligently and adequately performed. Those appointed to serve on the Commission are: Drs. William P. Herbst, Jr., A. Magruder MacDonald, Herbert S. Gates, O. H. Fulcher, Raymond T. Holden, Robert J. Coffey, and Brian Blades.

★

"... A Nation's Sick Parade..."

Critics of Britain's National Health Service have made a good case against the establishment of a similar system in this country. However, they have, to your Observer's knowledge, shown little interest in the views of Health Service officials on this subject.

In conversing with them recently, your Observer was told more than once that there was no point in comparing conditions in the two countries, because they are so vastly different. They were frank to say the adoption of the British system in the United States seemed to them neither practical nor desirable. They insisted, however, that in their own land it is as satisfactory a solution to their health problems as could be devised. They were well aware of the flaws in their Service, and did not hesitate to mention some of them. Perhaps, they suggested, we could learn a little that might have some application to our problems from the mistakes which had been made in the conduct of their health program.

It happened that, at the time of these conversations, there was considerable publicity in the English newspapers about the great number of people certified as being incapable of working because of sickness. Lord Beaverbrook's *Sunday Express*, for July 8, 1956, carried this front page headline: THE MISSING MILLION.

> "Every working day," the political correspondent for the *Express* wrote, "one million people are away from the workshops and offices of Britain on grounds of sickness. This figure, compiled by Government researchers, has shocked the Cabinet into ordering a drastic shake-up of the nation's sick parade.
>
> "Man-hours lost through this cause are nearly 100 times as great as those lost through strikes. And the Government believes that much of this absenteeism is attributable to slackers.
>
> "With production and exports falling, and Britain committed to an all-out trade battle for survival as a major nation, the Cabinet has decided that this wastage cannot be allowed to continue.
>
> "So ways are being discussed of getting tough with the always-ill types, and with the good-time boys who take days off to go to the races.
>
> "Coöperation will be sought from the unions, the employers—and from the doctors.
>
> "Managements will be asked to probe sickness absenteeism more thoroughly; the unions—whose leaders in the T.U.C. meet Sir Anthony Eden soon—will be urged to arouse a new spirit among their men; and the doctors will be told to tighten up the issue of absence chits.
>
> "The approach to the doctors may be through their spokesmen at the head of the British Medical Association, or in the form of a directive issued through the local health councils. In either case, its theme will be: 'Watch for the dodgers. We can't afford them.'"

Health Service officials admitted that this was a serious problem, not only for the Service, but for the doctors themselves. Pressure on the latter to certify patients on their panel was unavoidable and, too, it was no simple matter to ferret out malingerers. As one official said, "If a man says he has a backache, how are you going to prove that he hasn't?" In an effort to improve the situation, a second examination by physicians chosen by the Service is being made of individuals whose inability to work, because of their physical condition, is in question.

This is just one of the many problems confronting those responsible for the administration of the Service. It is easy to condemn the set-up as one that encourages this sort of thing, but one comes away with the feeling that the Service, considering the complexity and size of the undertaking, is commendably administered. It was significant that most of the people with whom your Observer talked—and there were quite a number—were satisfied with the medical care they received.

Britain is working out her health problems in her own way, just as we are doing. Her solution is not ours, and never will be, for a variety of reasons, the principal ones being the comparative vastness of our country and its higher standard of living.

★

The Aging Problem

Although serious efforts are being made in this and other countries to cope with the problem of the aged, no one but an incorrigible optimist would say that so far they have been attended by signal success. It is true that in some countries there has been encouraging progress; however, in the United States, on the basis of available information, an over-all, realistic program remains to be developed.

Admittedly, small countries, such as Norway, can meet this problem more readily and effectively than a nation with such a diversity of interests and conditions as exist in the United States. Nevertheless, it is well for us to take note of the soundness of her planning.

Norway, at present, has a population of something over 3 million persons. From 1920 to 1950 the number of people in that country over 65 years had risen from 203,624 to 316,008, i.e., an increase of 112,384, or about 55 per cent. The number of people over 70 years had increased from 128,242 to 206,654, i.e., by 78,412, or about 61 per cent. From 1950 to 1970 it is anticipated that the increase will be sharply upward; that the number of people over 65 will rise further to 504,050, i.e., by 188,042, or about 60 per cent, and the number of people over 70 will increase to 328,022, that is, by 121,368, or about 59 per cent.

It can readily be seen that a situation as serious as this requires intelligent and prompt action. What did Norway do about it? Through the good offices of the nation's Director of Health, Dr. Karl Evang, your Observer met key people in Oslo's forward-looking health and welfare program for the aged who are in need of assistance. Although not typical of programs existing elsewhere, it is looked upon as a blueprint for the rest of the nation.

Interestingly, voluntary health and welfare organizations are playing a major role in this program, pooling their home assistance services in a central office in an effort to provide more and better service. Financial assistance is being given these organizations by the municipality of Oslo.

Outstanding features of the Oslo project are:

A well equipped geriatric clinic, the first of its kind in the country, began operation in 1952.

Health and welfare stations, of which there are 5 situated in various parts of the city, provide home nursing, meal preparation, foot care, laundering, house cleaning, correspondence, part-time employment, and club activities to the aged in their homes.

Suitable apartments for Old Age Pensioners of which 1,000 are now available. Another 500 are under construction, with 275 more to follow. Most of the apartments consist of 1 room, kitchen, and a balcony, while some, intended for married couples, have 2 rooms plus a kitchen. These are provided for the eligible at a very low rental.

Nursing homes are operated by the municipality and voluntary agencies. These, at present inadequate to meet the demand for beds, are being enlarged. New ones are about to be constructed.

A comprehensive recreational program, including various types of entertainment, is conducted, in which every aged person receiving assistance is invited to participate.

Emphasis throughout is on the integration of the aged into society in such a manner that they will not be set apart from the rest of the population.

Dr. Evang was modest but pleased with the progress which has been made, especially in Oslo. However, he said Norway had only made a beginning; that much remained to be done to perfect its program.

Your Observer was particularly anxious to see some of the apartment units, which, unfortunately, time did not permit. He did visit the geriatric clinic at Ulleval Hospital, in Oslo, a modern and well equipped building. He was told by the physician in charge that another building of equally modern design was being constructed nearby.

Your Observer would not suggest for a moment that nothing has been done for the aged in our own country. However, the great need would seem to be the coördination of the efforts of the Federal, state and local governments and the voluntary agencies, in which the heart would be as important a factor as the pocketbook. A move in this direction was made when President Eisenhower appointed the Federal Commission on the Aging. The Commission will undoubtedly make a real contribution if given the financial support required.

There is considerable interest among the medical profession in this problem, one of the most able leaders in this cause being Dr. Edward J. Stieglitz, of Washington, described by *Time* Magazine as "swashbuckling and iconoclastic" because of his impatience with the progress to date.

Dr. Stieglitz and a number of his distinguished colleagues spoke their minds recently at the University of Michigan's annual Conference on Aging. They, together with a number of other experts, agreed that "There must be imaginative and vast new developments on the social and economic fronts to forestall a future crisis of aged in the U. S., and the major attack must come from the medical profession."

In the light of this statement, some quotations from physicians in attendance at the Conference will be of interest.

Dr. Edward L. Bortz, Past President of the American Medical Association, urged physicians to exert themselves so that there would be fewer of what he called "chemical Methuselahs" who are a burden to themselves and to society. Said Dr. Bortz: "Three-fourths of our medical work nowadays is with older people. This makes geriatrics the No. 1 specialty whether we like it or not."

Said Dr. Edmund Vincent Cowdry, of St. Louis' Washington University: "The emphasis is going off youth and going on age. Geriatrics is where pediatrics was 40 years ago. It has been the unwanted child. But grandmother must have her specialist, too. It took medicine centuries to discover that the infant is not just a little man, and to set up the specialty of pediatrics. It has taken longer for medicine to learn that the elderly person is not just an old boy."

Dr. Stieglitz adhered to the theme with which his name has long been linked. "Health is a lot more than the absence of disease. Pediatrics has been making healthy children healthier. Geriatrics could do the same. The trouble is that doctors think entirely in terms of disease, and are ignoring their opportunities for making aging people healthier."

"Until it brings health as well as longer life," Dr. Stieglitz said, "medicine will be saving some persons who don't want to be saved and are worthless to society. We are coming to a stage where keeping these people alive will jeopardize the lives of those fit to survive."

Pointing up the situation in our country is the fact that persons over the age of 65 now comprise 8.4 per cent of the population. By 1980 it is estimated they will make up 10 to 15 per cent in a population of about 225 million.

From a medical standpoint some interesting experiments are under way. Dr. William B. Kountz, for example, got Washington University to underwrite a research program at the old city infirmary, then shifted it to St. Louis Chronic Hospital in 1943, where about half of the 1,600 patients are afflicted with disorders due to old age. Funds raised by Dr. Kountz, including a $2,000,000 bequest, have made it possible for him and his staff to reduce the death rate by half.

In the early days, Dr. Kountz states, no one ever returned to his home. Now, every month 10 to 15 elderly patients are returning to their homes, to industry, and to healthy retirement.

Dr. Kountz has experimented cautiously, and it appears with considerable success, with hormones and other therapy, in reducing the incidence of disease in the aging.

As the Conference recognized, the care of the aged has many facets, and health is not the sole factor in keeping oldsters active and content. A program which assures them of their acceptance by society, their security, and the affection of those who surround them will do much toward mitigating this problem.

What about conditions in the District of Columbia? Here, too, the problem has not been neglected, but the fact is that much remains to be done. The United Community Services Committee on the Aging, under the dedicated and able leadership of Mrs. Albert W. Atwood, has striven mightily to improve the situation, with no small measure of success. With insufficient finances, however, the effectiveness of this Committee has been limited. All in all, however, only the surface of this fertile field has been scratched. It is time for the people of the District to bestir themselves and take a realistic look at this problem. Once they have the facts, they should take a vigorous course of action before the situation becomes critical.

★

"... Worst Writing ..." Never one to mince words, Dr. Paul R. Hawley, Director of the American College of Surgeons, in an article, "Medical Writing," which appears in the current issue of *The General Magazine and Historical Chronicle*,* writes: "With few exceptions, the worst writing I have ever encountered has been in medical publications."

"I do not know why this should be true," Dr. Hawley continues, "except that medicine is almost the only profession, other than literature, in which the reputation of the individual is largely determined by his publications; and medicine differs from literature in that medical reputation is based upon quantity of writing whereas literary reputation depends upon quality."

Dr. Hawley

One could hardly be more frank in expressing an adverse opinion of the literary skills of one's colleagues, but this is characteristic of Dr. Hawley. Whatever his object, one suspects that he delights in stirring things up a bit and, of course, it is usually a surefire method of attracting attention.

As for his own literary gifts, he says very little, allowing his contribution to speak for itself. His article is, for the most part, devoted to the mechanics of writing. Generally, his opinions are orthodox but expressed in a vigorous and, not infrequently, entertaining manner. The following excerpts have been chosen as a fair sample:

> "I doubt that even experts can *teach* people to write; everyone must learn for himself, and only practice makes perfect."
>
> "I think it would be a reasonable assumption that ninety per cent of the medical literature of today could be dispensed with; and that this would increase, rather than diminish, the dissemination of medical knowledge. I am aware of the heresy of such statements, and I offer them only as personal opinions.
>
> ". . . precision is the most essential requirement of scientific writing. Looseness of expression, with its danger of misinterpretation, is intolerable in medical writing."
>
> "I have had only a vicarious exposure to the so-called progressive education of today; but it has been enough to cause me great concern over the future of the English language. I have four grandsons enrolled in an experimental elementary school operated by the Department of Education of a university old enough to know better. If, at the age of twenty-one, any one of them will be able to pass the simplest literacy test, I shall be greatly surprised."
>
> "There are those in all walks of life—one frequently encounters them—who actually boast of their inability to spell. I have always regarded this as an attempt to make a virtue of a necessity. I think the psychiatrists have a word for this—'sublimation,' is it not?"

---

* Spring-Summer 1956. Published by The General Alumni Society, University of Pennsylvania.

"I think that the use of bad grammar by a presumably educated person always raises doubt as to his professional competence."

"I cannot grasp the full meaning of a sentence of any length which is not broken up at proper places at least by commas. . . . Now, liberal use of punctuation by no means implies indiscriminate use of punctuation. One occasionally encounters an author who apparaently types a page of manuscript and afterwards sprinkles over it at random a mixture of punctuation marks. This is even more confusing to the reader than the omission of all punctuation.

"While medical writing is susceptible to the ills of all writing, it suffers from a few diseases peculiar to itself. One of these is the obsessive compulsion to undertake an exhaustive review of the history of a subject before embarking upon the new, or allegedly new, contribution to the subject."

"A manuscript always reads differently a day or two after it has been written. Approach each revision in a completely detached manner—as if you had never heard of the author, and place yourself, so far as possible, in the position of an unknown reader."

"Like the finishing of a fine piece of furniture, one of the objectives in each revision should be the removal of glossy finish which gives the appearance of cheapness. The result of this job of finishing is what is known as style in writing."

"Finally, if after a number of revisions you still have grave doubt of the value of the paper, throw it away. You must be your own severest critic."

To those who know Dr. Hawley, his candor will occasion no surprise. One thing that must be said for him is that, although a controversial figure where doctors are concerned, he is never dull. If a keen interest in all that goes on about one is what keeps a man youthful, Dr. Hawley's later years should be very late indeed.

T. W.

ORAL PRESCRIPTIONS OF NARCOTICS

H.R. 11320, a bill passed by the 84th Congress, became law when it was signed by President Eisenhower on July 24, 1956. Title III of this Act, which amends the D. C. Uniform Narcotic Act of 1938, provides, among other things, authorization for the acceptance by pharmacists of oral (telephoned) prescriptions from practitioners of medicine, dentistry and veterinary medicine who are currently registered with the Federal Bureau of Narcotics.

Pending complete revision of the Narcotic Act, the following pertinent changes are included in this memorandum for your guidance. Oral prescriptions may now be accepted for the following:

1. CODEINE (Methylmorphine): Codeine content of compound must not exceed 8 grains per fluid ounce or 1 grain per dosage unit. Codeine must be compounded with—

(a) "one or more active non-narcotic ingredients in recognized therapeutic amounts" (examples, Empirin Compound with Codeine, A.P.C. with Codeine, Coricidin with Codeine, Trigesic with Codeine); or

(b) "an equal or greater quantity of an isoquinoline opium alkaloid or salt thereof" (example, Copavin).

2. DIHYDROCODEINONE (Hydrocodone, Dicodid, Hycodan) or any salt thereof: Dihydrocodeinone content of compound must not exceed 1⅓ grains per fluid ounce or ⅙ grain per dosage unit. Dihydrocodeinone must be compounded with—

(a) "one or more active non-narcotic ingredients in recognized therapeutic amounts" (examples, Bicotussin Syrup, Coditrate); or

(b) "a 4-fold or greater quantity of any isoquinoline opium alkaloid or salt thereof" (example, Dihydrocodeinone 4 mg. with Papaverine, 16 mg.).

3. DIHYDROHYDROXYCODEINONE (Oxycodone, Eucodal) or any salt thereof when compounded with 1 or more active non-narcotic ingredients in recognized therapeutic amounts. Dihydrohydroxycodeinone content must not exceed ⅔ grain per fluid ounce or 1/12 grain per dosage unit. Narcotics Bureau does not know of any pharmaceutical specialty in this category currently on the market, but category was included to permit use in compounding oral prescriptions.

4. DIONIN (Ethylmorphine) or any salt thereof when compounded with 1 or more active non-narcotic ingredients in recognized therapeutic amounts. Dionin content must not exceed 1⅓ grains per fluid ounce or ⅙ grain per dosage unit (example, Terpin Hydrate and Cresote Compound with Dionin).

5. Any ISOQUINOLINE ALKALOID OF OPIUM or any salt of any such isoquinoline alkaloid, alone or in combination with other active non-narcotic medicinal ingredients. According to the Narcotics Bureau the only isoquinoline alkaloids of opium currently on the market are: Papaverine, Narcotine, Cotarnine, and Narceine.

6. APOMORPHINE or any salt thereof alone or in combination with other active non-narcotic medicinal ingredients.

7. NALLINE (N-allyl-normorphine Nalorphine) or any salt thereof alone or in combination with other active non-narcotic medicinal ingredients. It is an antidote for morphine poisoning.

The narcotic list for oral prescription does not include

1. Straight CODEINE, DIHYDROCODEINONE, DIHYDROHYDROXYCODEINONE or DIONIN. An effort was made to get straight Dionin included in the list for ophthalmic solutions, but was unsuccessful.

2. MORPHINE, or any of its salts or compounds, except when they are included in preparations that have previously been known as exempt narcotics. In fact, oral prescriptions can be given for any exempt narcotic preparation. This is logical because any exempt narcotic preparation can be purchased over-the-counter without any prescription within the limits set by Federal and state laws and regulations.

3. METHADONE COMPOUNDS (Amidone, Adanon, Dolophine). Methadone compounds with other non-narcotic ingredients were proposed with certain dosage limitations, but were not included in the final list.

4. OPIUM COMPOUNDS with other non-narcotic ingredients for topical application were proposed, but not included.

5. DEMEROL (Pethidine, Meperidine): Dilaudid (Dihydromorphinone); Cocaine, Pantopon; Metopon; Dromoran; Isomethadone; Methadol; Nisentil (Alphaprodine); Heptazone (Thebaine); Phenadoxone.

Like oral prescriptions for non-narcotic drugs under the Food and Drug Administration's Durham-Humphrey law, narcotic oral prescriptions must be reduced to writing promptly by the pharmacist, cancelled and filed as any narcotic prescription. The oral prescription narcotic law specifically requires that prescriptions be kept for 2 years.

Oral prescriptions can be given by any physician or other practitioner who has a narcotic registration. The practitioner must supply the pharmacist with the same information required for a written narcotic prescription.

Unlike FDA's Durham-Humphrey law, refills cannot be authorized by a druggist on either a written or an oral narcotic prescription.

PAREGORIC may be dispensed only on a written prescription from a duly licensed practitioner as in the past. However, the prescribing, administering, dispensing or selling at retail of any medicinal preparation containing not in excess of 25 per centum of Paregoric, in combination with some other drug or drugs which confer upon it medicinal properties other than those possessed by Paregoric, is permissible under the Act as amended.

DIHYDROCODEINONE or any of its salts, to the extent of $1/6$ grain per fluid ounce, has been added to the list of preparations exempted.

So far as the physician and the pharmacist are concerned, the amended law has the effect of creating 3 classes of narcotic preparations:

1. BY WRITTEN PRESCRIPTION: All narcotic preparations that do not fall in either of the next 2 categories still require a written prescription before the pharmacist can deliver the drug to the patient.

2. BY ORAL PRESCRIPTION: Oral prescriptions can be accepted by the pharmacist for preparations as listed in the foregoing paragraphs. Oral prescriptions can be filled for prescriptions that require compounding as well as those available in pharmaceutical specialty form.

3. EXEMPT PREPARATIONS: No prescription is required for exempt narcotic preparations which can be purchased over-the-counter; however, a written record of such prescriptions must be kept by the pharmacist as in the past.

Except for the simple fact that oral prescriptions are authorized for a limited number of narcotic preparations, the new law and regulations do not change anything else with regard to the responsibilities of doctors and pharmacists in the handling of narcotics.

Issued by order of the Board of Pharmacy, July 26, 1956.

John E. Donaldson, *President*
Harold C. Kinner, *Secretary*

THE STATUS OF MEDICAL NEUROLOGY*

FRANCIS M. FORSTER, M.D.

Dean, Professor and Director of Department of Neurology, Georgetown University School of Medicine

A Chairman's Address, like an after-dinner speech, has become a well established custom in American society. Indeed, in the Section on Nervous and Mental Diseases of the American Medical Association, which is the father-figure for this Section, the Chairman's Address has been a time-honored custom almost since the inception of the Section. Although this has not been a regular procedure in our own Section on Neurology and Psychiatry of the Medical Society of the District of Columbia, I hope that my fellow members of the Section will bear with me in this venture. The Chairman's Address may be either a presentation of scientific material, and then indeed it is no different than any other paper on the program, or it may be used as an opportunity by the Chairman to review for the particular field of medicine the historical trend, the present status, and/or his concept of future developments. I have chosen the review of the field for my address to you this evening.

Before proceeding to my own field, that of medical neurology, I think it pertinent to glance for a few moments at the development of our own Society in the District of Columbia and the environs in which it was conceived, born and developed. Our Society is the twelfth in temporal order of the medical societies in the United States. It is interesting to note that the first organized meeting of physicians was held in 1813, 13 years after the founding of the City of Washington. The occasion for this first meeting of the physicians was to meet in memory of Benjamin Rush, the distinguished physician and signer of the Declaration of Independence. There were then not many more than 9 or 10 physicians in the District of Columbia. Indeed, the City of Washington has twice in its history had a peculiar population development that taxed its medical resources. This was the only city in the United States which was laid out on acreage and occupied within a few years as a city and not a village and became a center of national thinking from the political and economic standpoints. The City of Washington grew slowly and progressively until the 1930's, when the sudden upsurge in population and growth and reorientation in thinking regarding the Federal City must have undoubtedly cast the second taxing burden on the medical facilities.

In the field of diseases of the nervous system, there were many recorded instances of scientific presentations that would evince a great interest in this field. From the neurologic as well as the patriotic standpoint, we cannot help but picture in our own minds the meeting on the third of May, 1865, when Dr. R. K. Stone read an account of the death and the results of the autopsy on President Lincoln. That the Medical Society was not easily convinced in matters regarding the neuromuscular system is evinced by the paper of Dr. Louis Mackall, Jr. regarding the philosophy of muscular action and the bitter criticism that lasted through several meetings. On August 30, 1865 Dr. Johnson Eliot gave a demonstration on how the cranium is made secure after trephination. With the development of specialization it became necessary that the Society divide into sections just as happened in the parent association, the American Medical Association.

Changes in the medical societies mirror changes in the art and practice of medicine. It is therefore worthwhile to turn to the development of the field of medical neurology at the present time. Neurology has a most peculiar history in that it was originally developed as a field of interest in the organic diseases of the nervous system. At this time our colleagues, the psychiatrists, were primarily concerned with the institutional care of patients and with court proceedings, thus leaving the field of office practice of psychiatry relatively unattended. This resulted in the neurologists, either by choice or by accident, finding themselves involved in this phase of office practice.

The field of psychiatry is numerically larger than the field of medical neurology, and the effect of this fact upon neurology is similar to what has happened to invading armies so frequently in history. The Mongols and Tartars lost their identity in their sweep across Europe, leaving only a few facial

---

* Chairman's Address, delivered before the Section on Neurology and Psychiatry of the Medical Society of the District of Columbia, March 1, 1956.

characteristics of themselves. This very nearly happened to neurology as it became enmeshed in the practice of psychiatry. In the late 1940's there was considerable concern among the younger neurologists. This concern stemmed from the threatened loss of identity of the field of medical neurology. This group of neurologists dedicated to medical neurology banded themselves together as Founding Fellows of the American Academy of Neurology. This movement has since served to give great strength and impetus to what may be called dynamic neurology. This is not a neurology which is content with nosologic acrobatics in the naming of entities or the classification of patients but is concerned with treatment and with the critical search for etiology, prevention and the therapeutic rationale based on the preclinical sciences.

This dynamic neurology has made its impact in the Washington area. Figure 1 shows the number of approved residencies in neurology in Greater Washington from 1945 through 1955. There are 10 times more approved residencies now than 10 years ago in more than twice as many institutions. Looking at this chart, one cannot help but wonder where this curve will reach a plateau. At the present time there is no fear or need to be concerned about overproduction of neurologists. The men in the teaching and training programs are still plowing trainees back into their own departments or releasing them to join other teaching departments in other universities. Our aims are still to teach and train men for the teaching and research aspects of neurology. We have not yet approached the plateau where we would accept men for training primarily to practice. The need is still so great that one cannot afford to train the 'last of the Mohicans.' The candidates must train other candidates who must train other candidates. The allure of neurology and the appeal of its rational approach is so great that there is little or no difficulty in filling the residency programs, and so the program directors can choose the most likely candidates The full impact of these programs cannot be measured at this time. There is an impact on service to the community. Patients with diseases of the nervous system are treated more capably than they were before, and medical students are better trained in the field of the diseases of the nervous system because there are more residents on full-time duty at the hospitals. The students will fire their questions on residents before going to the department heads, and the more residents there are to answer the first round of questions, the stronger the teaching program.

One might question whether the development of these programs has encroached in any way upon the adjacent fields of medicine, that is, psychiatry and neurosurgery. There is certainly no indication that these have in any way encroached upon psychiatry. The departments of psychiatry have flourished and grown, and every neurologist knows how short the supply of psychiatrists is. When the neurologist finds a psychiatric patient in his practice, he often encounters great difficulty in effecting a referral because of the shortage of psychiatrists. In regard to our sister science of neurosurgery, the advance in medical neurology in a community has a very salutary effect on the practice of neurosurgery. The neurosurgeons are relieved of much of the necessity of seeing medical neurologic patients. The treatment of epilepsy and Parkinsonism, the diagnosis of multiple sclerosis, the handling of muscular dystrophy, the care of the patient with a stroke, the long-term care of the patient with poliomyelitis, the acute care of the patient with purulent meningitis, and many other facets in diagnosis and treatment require the special skills of the medical neurologist. But this is not to the disadvantage of the neurosurgeon. There is a general increase in neurosurgical procedures as the number of neurologists increase. Better medical neurology in a community means more and better neurosurgery. To illustrate this, I have chosen

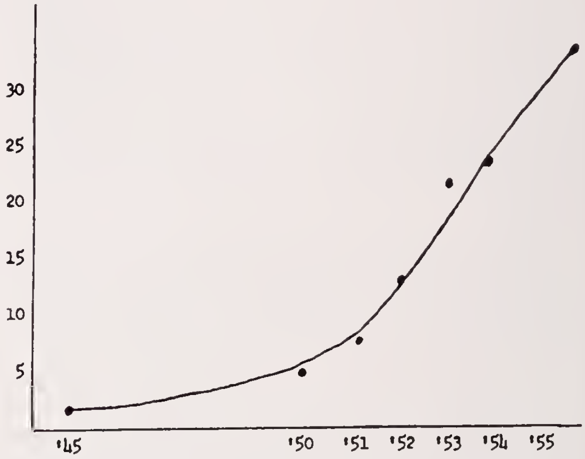


FIG. 1. Increase in number of approved residencies in neurology in Greater Washington.

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
May 27	Dr. Anthony Zappala	Alcoholism	Young Adult Group, Luther Place Memorial Church
June 11	Dr. Anthony Zappala	Alcoholism	Young Adult Group, New York Avenue Presbyterian Church
June 26	Dr. Julius Schreiber	The Psycho-dynamics of Inter-group Tensions	Summer School Work Shop, Howard University
July 22	Dr. Calvin T. Klopp, panelist	Cancer Control—Everybody's Business	Georgetown University TV Forum
August 14	Dr. George Maksim	Why Teen-agers Tire Easily	Civitan Club

the figures from a hospital, which we will designate only as "X." This hospital was chosen because its neurosurgical staffing was not altered in any way during the period of 5 years. During that time a neurology residency program was introduced. Immediately after the introduction of the neurology residency program the neurosurgical operations doubled. Operations here did not include pneumoencephalograms and myelograms but were major neurosurgical procedures. The impact of neurology on its sister specialties is a salutary one and leads to the equal growth of all 3 of these sister sciences.

To extrapolate from this into the future is not difficult. Medical neurology, neurosurgery and psychiatry in the District of Columbia should continue to maintain their astronomical growth. With 3 medical schools here, the reservoir of men desiring training in these 3 fields should remain a constant source of supply Research on the nervous system has been tremendously increased in the civilian institutions, and the greatest mark of development of research in this field in this whole country, indeed in the world, has occurred among our friends and colleagues who staff the Institute of Neurological Diseases and Blindness at Bethesda. The extramural program of this Institute is in no small way responsible for the growth of neurology in America.

Since the field of medical science in the realm of the nervous system has attained its majority in this community and has well-developed, thriving specialties, it behooves us to look for a moment at this Section which is our sounding board. The Section on Neurology and Psychiatry would be more aptly named Neurology, Neurosurgery and Psychiatry to describe faithfully its functions, and I recommend to the membership of this Section that a semantic alteration in this regard be considered.

Our Section is still woefully weak. Your good Secretary and I purposely brought in a speaker who, in my own experience as Secretary of the Section on Nervous and Mental Diseases of the AMA, had attracted the largest group ever to attend a session of the Section on Nervous and Mental Diseases. I blushed to see that he addressed what was arranged more conveniently as a round-table discussion here in our meeting room. This poor attendance, in large part, has been due to the defection of one group of our colleagues, the psychiatrists. It is rumored that there is now a move to heal the breach. A welcoming committee should immediately go out from this Section to bring them back to the fold. At this point we should particularly compliment Dr. Lebensohn, who has always been a staunch supporter of this Section.

One of the problems in this Section has been the rapid turnover of officers. Societies that become strong and remain so, do so largely because there is one key officer who has a term of office of sufficient

(Continued on page 528)

On the Lighter Side

I have always associated bows and arrows either with wild and woolly Indians or with adolescent girls in boarding schools. I did, that is, until recently when I learned from Dr. Robert R. Montgomery that it just isn't so. Bows and arrows are used today by hundreds of virile hunters who have a good sense of fair play. In fact, Dr. Montgomery says there are hundreds of such hunters right here in our area.

There are bow-and-arrow clubs and associations functioning in Washington, Virginia, Maryland, West Virginia, and Pennsylvania which hold weekly meetings, tournaments, and assorted practice sessions. Dr. Montgomery belongs to the local group and he is as enthusiastic about bow-and-arrow hunting as is any gun-hunter that I have ever talked to.

It takes fine skill, a keen eye, steady hands, and lots of muscle in the right places to knock down a moving deer at a hundred yards. Dr. Montgomery confesses that he has missed many a buck deer when the animal was close enough to hit because that old buck fever struck him at the same time that he sighted the deer. And by the time he had stopped shaking the bow the puzzled animal had ambled off. All that Bob had to show for his efforts were his finger marks on the bow where he had gripped it so firmly to keep it from shaking apart.

Dr. Montgomery Takes Careful Aim

However, his hunting prowess revealed itself one day under unusual circumstances. Dr. Montgomery bagged a deadly copperhead snake with a direct hit when he noticed the thing slithering up behind his hunting partner. There may be a moral in that: The innocent deer goes free and the deadly serpent is destroyed!

Hunting bows are individual just like guns. There are different styles, different string, and different pulling weights. The pulling weight varies from 30 pounds to over a hundred pounds. The Tarzan-type muscle boys like to show off their strength by hunting with the heavy ones. The more mature and experienced hunter will settle for a 50-pound or less pulling bow. Dr. Montgomery graduated from a 30-pounder to a 45- to 48-pounder that he uses now on his hunting trips. Mrs. Montgomery is no slouch with the bow. She can pull one the same weight as her hunter spouse. Together they go up into the woods and pitch a tent and live the rough-and-ready life while hunting.

Bob states that it is best for the beginner in this sport to start with a lighter bow until the shoulder, arm and back muscles get accustomed to this new exercise. Then, after the bow-pulling becomes easier, go to a heavier pulling bow. Most bow-and-arrow hunters use a bow close to 50 pounds of pulling power.

I asked Bob if he lost many arrows in the woods and he answered, "Most all of them!" He explained that since the arrows travel over a hundred yards in most cases, if you miss the moving target the arrows are very difficult to find in the underbrush. "However," he said, "the bird arrows are easier to find because they have large feathers on the tail end, and since they are shot upward and do not travel much more than sixty yards they are easier to locate when they fall after a miss."

You can make real money bow-and-arrow hunting. In Canada there is a bounty on Canadian lynx.

(Continued on page 528)

News and Personals

MEETINGS

The Southern Medical Association will celebrate its **Golden Anniversary** with a special program at the Read House in Chattanooga, Tennessee, October 2–3. This will be an historical and inspirational meeting and will not conflict with the regular Annual Scientific Session in Washington, D.C., November 12–15.

The Southern Medical Association was organized at the Read House in Chattanooga, October 2–3, 1906. The Golden Anniversary Celebration will begin with a dinner meeting there on Tuesday evening, October 2. The principal address will be given by Dr. R. L. Sanders, of Memphis, immediate Past President of the SMA, who will speak on the subject, "Fifty Years of Medicine in the South." Dr. Dwight H. Murray, of Napa, California, President of the AMA, will be present at the morning session, October 3, when a plaque will be unveiled, to remain in the Read House, commemorating the birth of the SMA.

The Northern Virginia Academy of Surgery will hold its fall dinner meeting on Tuesday, October 2. **Dr. Robert A. Hingson, Jr.,** of Cleveland, Ohio, nationally known anesthesiologist and a pioneer in the field of caudal anesthesia, will be the guest speaker. In presenting his subject, "Perianesthetic Deaths," he will give special consideration to the problem of preventing postoperative fatalities.

Because of the unusual interest in this subject, the Academy decided to open this meeting to nonmembers. Please call Dr. Michael Puzak, Jackson 2-9080 for dinner reservations before September 25.

GENERAL NEWS

The Medical and Public Health Services for Civil Defense have announced the formation of the **D.C. Disaster Medical Training Center,** which is located in the old Upshur Street Hospital building. The core of the Training Center will be a complete Federal Civil Defense Administration 200-bed emergency hospital, one of the thousands currently being mass-produced for FCDA for stockpiling around target areas. The entire third floor of the building has been made available for the portable hospital and to conduct training activities.

A special meeting was held at the Center, July 26, for the purpose of acquainting medical and paramedical people of this area with the facilities of the training center. It is intended that numerous short courses for physicians, nurses, dentists, and other needed groups will be given at the Center.

The new **National Library of Medicine** became official, August 3, when President Eisenhower signed the legislation for its establishment. It will absorb the historic Armed Forces Medical Library, now located at Seventh Street and Independence Avenue, S.W., and will be an agency of the Public Health Service, Department of Health, Education and Welfare.

The new Library will be administered by a Board of Regents, consisting of 7 medical officials of high rank in Federal agencies and 10 members to be appointed by the President and confirmed by the Senate. At least 6 of the appointed members, according to the legislation, shall be selected from among leaders in the field of medical, dental or public health research or education.

A site for the new Library will be selected by the Board of Regents.

Dr. Leroy E. Burney was appointed **Surgeon General of the Public Health Service** by President Eisenhower, August 3, to succeed Dr. Leonard A. Scheele, who resigned recently.

LEROY E. BURNEY, M.D.
Surgeon General of the Public Health Service

Dr. Burney is a graduate in medicine of Indiana University (1930). He studied under a Rockefeller Fellowship at Johns Hopkins University School of Hygiene and Public Health from 1931 to 1932, receiving the degree of Master of Science in Public Health. His service in the Regular Corps of the Public Health Service began in 1932.

He established the first mobile venereal disease clinic service in Brunswick, Georgia, 1937–39. In 1944 he was detailed to the Navy and sent overseas by the War Shipping Administration to investigate and determine effective measures for diminishing the amount of communicable diseases, especially venereal diseases, in various Mediterranean ports. He was on detail from the Public Health Service from 1945 to 1954 when he served as Secretary and State Health Commissioner of the Indiana State Board of Health. He came to Washington in August, 1954, as Assistant Surgeon General and Deputy Chief of the Bureau of State Services, Public Health Service.

His special fields of interest are radiology, accident prevention, chronic diseases, and problems of the aged.

Dr. Burney is a member of the American Medical Association, Indiana State Medical Association, and Indianapolis Medical Society; a Fellow of the American College of Physicians and the American Public Health Association; Past President of the State and Territorial Health Officers; and a member of the Founders Group and Trustee of the American Board of Preventive Medicine. He is Regent for Region 4 of the American College of Preventive Medicine and a member of the Commission on Chronic Illness.

Dr. and Mrs. Burney and their two children, Robert and Kay, live in Hunting Towers, Alexandria, Virginia.

The 1956 Medical Economics Awards provide a top award of $500 for the best article in the field of medical economics written by a physician, with additional awards of up to $300 each for other articles written by physicians and found acceptable for publication. Manuscripts, from 1,000 to 3,000 words in length, typewritten, double-spaced, should be submitted no later than December 31, 1956, to the Awards Editor, Medical Economics, Oradell, New Jersey.

The subject of an article should be limited to some particular aspect of medical economics, i.e., fees, practice management, handling patients, etc. Examples, anecdotes, and cases in point should be drawn from the doctor's own experience.

At the request of the Committee on Chemotherapy of the National Advisory Council and the National Cancer Institute, and with the advice of a committee of consultants, the Armed Forces Medical Library has compiled a **bibliography** of 3,700 items **on the chemotherapy of cancer.** Among the consultants was **Dr. Jeanne C. Bateman,** Clinical Instructor in Medicine of George Washington University. This bibliography was designed to bring up to date a previous list (An Index to Tumor Chemotherapy, 1949).

Copies of the new bibliography will be available for distribution in December. Requests should be directed to Cancer Chemotherapy, National Service Center, Bethesda 14, Maryland.

A National Neurological Foundation was organized in Washington, July 28. The purpose of the Foundation will be to provide special clinics throughout the country to help diagnose and treat the chronic, disabling afflictions due to multiple sclerosis and allied disorders. Its offices are located at 1025 Connecticut Avenue, N. W.

Dr. Francis M. Forster and Dr. Desmond S. O'Doherty, of the Department of Neurology at Georgetown University School of Medicine, were named Medical Director and Assistant Medical Director, respectively.

Funds to finance the Foundation's work will be raised by private solicitation rather than by public fund-raising campaigns.

Sponsors of the Foundation state that it will not conflict with the already established National Multiple Sclerosis Society, which concentrates on raising funds to finance medical research on neuromuscular disorders.

Colonel Richard P. Mason has been named **Commandant of Walter Reed Army Institute of Research.** He succeeds Brig. General John R. Wood, who has retired from the Army to accept a position with a New York pharmaceutical company.

From 1948 to 1951, Colonel Mason served as Assistant Chief in the Institute's Department of Virus and Rickettsial Diseases. In 1951 he was assigned to Korea, and in 1952 became Commanding Officer of the 406th Medical General Laboratory in Tokyo. For the past two years he has been Chief of the Research and Development Division, Office of the Surgeon General of the Army.

Dr. Philip L. White became the new Secretary of the **AMA's Council on Foods and Nutrition,** September 1. He has been on the staff of the Department of Nutrition of Harvard School of Public Health for a number of years. In the fall of 1951, he took leave of absence to serve as nutrition advisor to the Department of Nutrition of the Peruvian Ministry of Public Health. Last winter he was a member of the U.S. Nutrition Survey Team which conducted a nutrition survey for the armed forces of Iran.

The following grants have been awarded to local cancer clinic and diagnostic facilities by the **District of Columbia Division of the American Cancer Society:** Children's Hospital, $4,145; Episcopal Eye, Ear and Throat Hospital, $3,600; Garfield Memorial Hospital Tumor Clinic, $10,960; George Washington University Hospital, $14,800; Georgetown University Hospital, $15,720; Howard University, $4,256; Visiting Nurse Association, $9,800; and Washington Home for Incurables, $5,000.

These funds are intended to further cancer research, detection and treatment and to expand other patient services in the community.

The Washington Heart Association during the past fiscal year made total grants of $32,700. The following Washington institutions and physicians benefited by these grants:

Georgetown University School of Medicine: Drs. Frank A. Finnerty, Jr., Charles A. Hufnagel, John G. Keller, and Mitchell W. Spellman

George Washington University School of Medicine: Drs. Frank Allan, John M. Evans, George Kelser, Bernard Ostrow, and Alvin E. Parrish

Howard University School of Medicine: Dr. K. Albert Harden

D.C. General Hospital: Dr. Sol Katz

Nationally, a total of $1,042,817 in grants-in-aid were awarded for research in heart diseases.

PERSONALS

Dr. Frank E. Wilson and Dr. Frank W. Konzelmann, both members of the Board of Directors of the Joint Blood Council, attended an important planning meeting of the Board in Chicago, June 15. At this meeting Dr. Wilson was reëlected Vice President and Secretary of the Board.

A Nationwide survey of blood banks will be carried out under the direction of Dr. Wilson, who will also serve as chairman of a Project Advisory Committee to assist and advise in the survey and in the publication of a National Blood Banks Directory.

Dr. Konzelmann was appointed to serve on a committee which will investigate reports that the pharmaceutical industry is not receiving enough "surplus" blood to keep its blood fractionating facilities in operation.

Dr. Wilson described to the Board his visits to various parts of the country to obtain an over-all picture of some of the progress and problems in blood banking. His itinerary included visits to blood banks and blood bank associations in the states of New York, Washington, California, Arizona, Wisconsin, Michigan, and Texas.

A testimonial dinner in honor of **Dr. Joseph F. Fazekas,** Chief of Staff at District of Columbia General Hospital, was held on August 7 at the Kennedy-Warren. More than 40 physicians, including members of the Hospital's Executive Committee, medical officers, and house staff gathered to recognize the many accomplishments of Dr. Fazekas since his appointment as Chief of Staff.

Dr. Fazekas

"Unlike many testimonials," said Dr. Howard S. Madigan, toastmaster for the evening, "we are paying tribute to someone who is still in the midst of achievement. Dr. Fazekas is not only busy with the work at hand, but planning future improvements in patient care, teaching and research at D.C. General."

Members of the Hospital's Executive Committee who praised the excellent work of Dr. Fazekas included Drs. Hugh H. Hussey, John Parks, Paul B. Cornely, and Robert J. Coffey.

Dr. Sol Katz, who has been a medical officer at D.C. General since 1946, spoke for the medical officers and described Dr. Fazekas' sincerity of purpose in regard to D.C. General as outstanding.

Climax of the evening was the presentation of a citation by Dr. Forest K. Harris II, Chairman of the Intern-Resident Committee. A 'Record of Achievement' in affairs of community health, hospital improvement, teaching and research was the theme of the citation. Specific mention was made of Dr. Fazekas' efforts in behalf of the house staff, who were grateful for the ultimate success in obtaining a salary increase for interns and residents at D.C. General.

Dr. Robert H. Detwiler, pediatrician, an Associate member of the District Medical Society, received the Third Annual Welburn Award for distinguished service to medicine from the Arlington County Medical Society. The presentation was made, June 28, at the Washington Golf and Country Club.

Drs. Henry A. Hornthal and Harry Clark Bates were presented with certificates of appreciation for their services as Past Presidents of the Society. Dr. Hornthal is an Active and Dr. Bates, an Associate member of the D.C. Medical Society.

Dr. Lorenz E. Zimmerman, Chief of the Ophthalmic Pathology Section of the Armed Forces Institute of Pathology, served as an instructor in pathology of the eye at the Lancaster Courses in Ophthalmology, held at Colby College, Waterville, Maine, July 9–21. Dr. Zimmerman lectured on inflammation, granulomatous lesions of the eye, intraocular neoplasms, pathology of the optic nerve, and ocular trauma. He is an Associate member of the District Medical Society.

Dr. R. Lomax Wells, Medical Director for the Chesapeake and Potomac Telephone Companies, was presented a four-star emblem in honor of his 20 years of service to the telephone industry. Dr. Wells began his career in industrial medicine in 1936 as examining physician for the Chesapeake and Potomac Telephone Company of Washington. In 1947 he became Medical Director for the four C & P Companies operating in Washington, Maryland, Virginia, and West Virginia.

Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, will participate in a Centenary Celebration at Washington University, St. Louis, September 28 and 29. Under the theme, Psychology in Perspective, the celebration will commemorate the birth dates of Kraepelin and Freud, and the centennial of the graduation in medicine of Wilhelm Wundt, the Father of Experimental Psychology.

Dr. Overholser will speak on Kraepelin's contributions to clinical psychiatry. Other participants will be Professors Edwin G. Boring, of Harvard; Julian Huxley, of Oxford; and Bunch, Rosenzweig and Gildea, of Washington University.

Dr. Wallace L. Chan has been appointed Assistant Professor of Physiology at George Washington University School of Medicine.

Rear Admiral Lamont Pugh, an Honorary member of the D.C. Medical Society, was retired from the

United States Navy on August 1, 1956. He was the 25th Chief of the Bureau of Medicine and Surgery and the 21st to hold the title of Surgeon General of the Navy. On July 30, colleagues and friends of Admiral Pugh held a dinner in his honor at the Officers Club in Bethesda.

Dr. Jacob J. Weinstein addressed the hospital staff of the Meyersdale Community Hospital and the Summit County Medical Society in Meyersdale, Pa., August 3. The title of his talk was "Fluids and Electrolytes in Health and Disease."

Dr. Harvey N. Shapiro, formerly of Washington, is associated with the Lakeville Medical Center, 2035 Lakeville Road, New Hyde Park, New York, and has affiliated himself with the Nassau County and New York State Medical Societies. Dr. Shapiro served recently in the Medical Corps of the Air Force and was last on military duty at the Amarillo Air Force Base Hospital in Texas.

Dr. Douglas W. Terry, as Associate member of the District Medical Society, has accepted an appointment as full-time Instructor in Medicine at Creighton University School of Medicine in Omaha, Nebraska.

Dr. Armando M. Sison is in the Philippines for an indefinite stay. He may be addressed in care of the Philippine-American Compound, Quezon City, Rizal, Philippines.

MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, August 27, 1956, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

William L. Amoroso, Jr., 1150 Connecticut Avenue, N.W.
Arthur Burgerman, 1801 K Street, N.W.
Edward W. Hawthorne, 520 W Street, N.W.
Clarence D. Hinton, 1310 Farragut Street, N.W.
C. Ramsey MacCordy, 901 23rd Street, N.W.
Julius S. Piver, 2800 Woodley Road, N.W.
Philip H. Philbin, 1302 18th Street, N.W.
Pearl A. Watson, 1712 16th Street, N.W.

Associate Members

Clyde O. Brindley, National Cancer Institute, Bethesda, Md.
Robert L. Howard, 3853 Wilson Blvd., Arlington, Va.
John T. Lynn, Jr., 5241 St. Barnabas Road, S.E.
John M. Mennell, 2500 Wisconsin Avenue, N.W.
James W. Oberman, 2026 Tunlaw Road, N.W.
James M. Whitlock, 7600 Carroll Avenue, Takoma Park, Md.

Resident-Intern Members

Prokopes Colevas, 5509 13th Street, N.W.
Joseph F. Schanno, 9104 Wire Avenue, Silver Spring, Md.

The following applicants for membership will be voted on at the meeting of the Executive Board, September 24, 1956.

For Active Membership

Paul C. Adkins, Johns Hopkins University—1948
Theodore C. Alford, Johns Hopkins University—1947
Edgar N. Brawner, Jr., George Washington University—1951
Robert J. Brennan, George Washington University—1952
George C. Buchanan, Johns Hopkins University—1948
Wilfred R. Ehrmantraut, George Washington University—1952
Stanley H. Eldred, University of Michigan—1944
Victor H. Esch, George Washington University—1948
Leon Ferber, University of Tennessee—1937
Louis E. Fettig, Hahnemann Medical College—1947
John F. Gillespie, Georgetown University—1947
Charles E. Higbee, George Washington University—1952
Norman H. Horwitz, Columbia University—1948
Peter I. Kenmore, Hahnemann Medical College—1947
Wendell M. Lucas, Howard University—1950
Douglas B. Price, Ohio State University—1949
Dorothy A. Starr, University of State of New York—1950
Howard P. Treichler, George Washington University—1946

For Associate Membership

Crawford S. Brown, University of Michigan—1948
Harry E. Ferris, D.D.S., M.Sc., University of Pennsylvania—1951
Frances D. Hanusik, Georgetown University—1953
Dean H. Martin, George Washington University—1950
James R. McClelland, George Washington University—1951
Gordon M. Meade, University of Rochester—1935
Richard C. Myers, George Washington University—1947

For Affiliate Membership

Jean H. Pearson, Georgetown University—1952

For Resident-Intern Membership

Victor L. Assevero, Howard University—1950
Robert F. Dyer, Jr., George Washington University—1955
Ruth E. K. Jakoby, Columbia University—1953
Ruth I. Kirchstein, Tulane University—1951
Maxine A. Schurter, George Washington University—1951

WILLIAM JOHNSTON MALLORY, M.A., M.D., F.A.C.P.

(1874–1956)

A EULOGY BY ELMER LOUIS KAYSER

But the souls of the righteous are in the hand of God, and there shall no torment touch them.
In the sight of the unwise they seemed to die; and their departure is taken for misery.
And their going from us to be utter destruction: but they are in peace.
For though they be punished in the sight of men, yet is their hope full of immortality.
And having been a little chastised, they shall be greatly rewarded: for God proved them, and found them worthy for himself.
As gold in the furnace hath he tried them, and received them as a burned offering.
And in the time of their visitation they shall shine, and run to and fro like sparks among the stubble.
And their Lord shall reign forever.

(Wisdom of Solomon III, 1–8.)

I feel very humble as I try to say these words about a colleague and a friend departed.

William Johnston Mallory was a native of the Old Dominion and a graduate of the Virginia Mechanics Institute and of The George Washington University, from which he received the degree of Doctor of Medicine in 1903. His years of post-graduate training and early practice carried him far afield, to Europe and to the Far East, but it was in the city of Washington that he established a place of high eminence in his profession. True to the oath of Hippocrates he was a doctor in the real sense, teacher and practitioner.

Nothing I can say to you who were his students and his professional colleagues will add to the record which his brilliant career so fully documented. His long and distinguished tenure of the Chair of Medicine in the University, his numerous memberships in professional and scientific societies, the many posts of leadership to which he was elected and the formidable list of his publications—all of these attest, and attest eloquently, to his skill, his energy, his professional devotion, his willingness to serve. They show also the willing stamp of approval put on the man and on his rare accomplishments by those best qualified to judge.

But in this solemn hour, as convincing as all these evidences of attainment are, we have no desire to underestimate them when we say that William Johnston Mallory's greatness as a man is even more convincing. He was a person of great versatility. Had medicine not claimed him he might easily have attained equal eminence in the field of literature. For he had the high sensitivity, the fine discernment and the power to use words effectively that make the true literary artist. His reading was both broad and deep. He was at home in the classics, in the Sacred Scriptures, and in the great English masterpieces. Literary allusions crop up frequently in his writing, as do sentences and phrases from classical authors. There is never a trace of pedantry, for it seemed natural for him to speak like a philosopher or a prophet. With him knowledge had passed over into wisdom and the best formulation of the idea was the one he instinctively used.

He had a mind of rare quality. He could be precise without being precious. He could be critical without being censorious. He could be painstaking without becoming pedestrian.

Qualities of mind were equaled by qualities of heart. Not one of us here, and I certainly not the least, but can bear testimony to his generosity. Warm affection and deep loyalty to family and to friends were evident in his every word and act.

He was a man of deep faith. As far as I know he subscribed to no particular credal formulation, wore the badge of no denomination. He was one of those who do justly, love mercy, and walk humbly with God and man.

His last years were his great years. It is not so with many men. For retirement can mean boredom, frustration, fruitless passivity, and does so to many. It did not to the Doctor. Up there in Loudoun County he was working on a new career in a new medium. He was through with the old. There were still reminders around the place, like the stationery left over from 1720. "I am weary of it," he said. "It is beginning to be associated in my mind with troublesome business letters, and official medical stuff, and of that I am finished. It is the opposite of nostalgia." Imagine a man of seventy-four and no nostalgia! He was

"sick of bricks and mortar,
And the reek of city heat."

He longed for the place where

"the hills stand up in purple,
As old friends, to greet a friend,
And a rustle in the cornfield
Whispers: 'This is Journey's End.' "

"You know," he said, "this love of the earth grows upon one with age, and when Earth finally takes one, it is like going Home. We become a part of it spiritually, as well as physically. So it seems to me." A new life was opening up to him. "In this period of advancing years ('Must stop referring to that matter,' he chided himself) I am impressed by the advantages Age has over Youth. It gives me a feeling of responsibility, if not of real guilt."

He had "the time and the opportunity to see a green field, a gnarled apple tree in bloom, to hear running water, the chirp of a sparrow and the croak of a frog." He had time to work with his hands, to talk and to write, to write prose and to write poetry.

A slender volume of his writings, dedicated to that gracious lady who is so foremost in our sympathy today, displays the charm of his style, the warmth of his heart, and the depth of his understanding. From that volume, I read his requiem:

"In early dawn when lamps are dim,
And the sky grows pearly with morn,
Man and beasts are aware of Him,
As they see the new world born.

"Where was beginning? What is end?
Can finite mind e'er know?
'Tis enough to ken the Immanent Friend
And allow your soul to grow.

"Without beginning, 'world without end,'
Are you not part of the whole?
Your thoughts can never the plan amend,—
Cease to torture your soul.

"Lift up your eyes, and see His deeds,
Their wonders never cease,
Haste and bustle bring but needs—
Abide, and know His peace."

In that peace he now abides.

Dr. William Johnston Mallory, well known in the fields of medical education and internal medicine during his many years of practice in Washington, died suddenly, August 1, 1956, at his home in Lovettsville, Loudoun County, Virginia. He was a Life member and Past President of the Medical Society of the District of Columbia and Professor Emeritus of Medicine of George Washington University.

Dr. Mallory was born in Goochland, Virginia, August 25, 1874, the son of James H. and India M. Barker Mallory. His early education was received at Virginia Mechanics Institute, following which he attended George Washington University, receiving his medical degree in 1903. Shortly after his graduation from Medical School he went to the Philippines to become a resident physician in the Civil Hospital at Manila. Later he practiced at Baguio, where he saw patients of every social scale, from members of the Governor's family to native head-hunters.

Returning to the States, he began his long career of teaching and medical practice, which was interrupted only by a visit to European medical centers. During the years 1908 to 1910 he did postgraduate work in London and Cambridge, England, and in Berlin, Germany.

In 1907 he married Miss Helen C. Slater of Washington. Not long after their marriage they went abroad. During his sojourn in London, Dr. Mallory "walked the wards of St. George's Hospital with Dr. Rolleston, later Sir Humphrey Rolleston, Physician to the King. By him I was sent to Workington on the Scotch border to make some observations on an epidemic of typhoid fever." He received an interesting memento of this association, an autographed book of medical essays, written by Sir Humphrey, which is now in the Library of the Surgeon General of the Army.

Upon his return to Washington in 1911 he resumed his teaching career, which continued uninterruptedly until 1938. He was appointed Professor of Medicine at the George Washington University School of Medicine in 1924, a post which he held for 14 years, when he became Professor Emeritus. He practiced his specialty, internal medicine, at 1720 Connecticut Avenue, N.W., in association with Dr. John A. Reed, from 1923 to 1946, when he retired to spend his later years on his farm in Loudoun County, Virginia.

Dr. Mallory was a veteran of World War I. He served as a Captain in the Army Medical Corps from 1918 to 1919. Subsequently he became a Lieutenant Colonel in the Army Medical Reserve Corps.

Dr. Mallory was elected to membership in both the Medical Association and the Medical Society of the District of Columbia in 1911. He was Vice President of the Society in 1929 and President in 1938–39. Following his presidency, he served for four years on the Executive Board and as chairman in 1942–43.

He was a member of the American Medical Association, a Fellow of the American College of Physicians, Past Secretary of the American Therapeutic Society, Past Secretary of the American Gastro-Enterological Association, and a diplomate of the American Board of Internal Medicine. He was a member and had served as President of the Clinical Society of the District of Columbia, the George Washington University Medical Society, and the Washington Medical and Surgical Society. He was a member of the Cosmos Club, the Metropolitan Club, and the Masonic Lebanon Lodge No. 7.

Dr. Mallory was the author of numerous medical articles on gastrointestinal diseases, diabetes, and medical history. Recently he published a book of poems.

His wife, Mrs. Helen Slater Mallory, survives him together with a brother, Walter Mallory, of McLean, Virginia, and a sister, Mrs. Robert Day, of Richmond, Virginia.

HENRY ALEXANDER POLKINHORN, M.D.

(1874–1956)

Dr. Henry A. Polkinhorn, Washington specialist in eye, ear and throat medicine for 58 years, died July 25, 1956, at Doctors Hospital.

Dr. Polkinhorn was a third-generation Washingtonian, the son of Samuel and Isabel Soper Polkinhorn. He received his medical degree from the Medico-Chirurgical College of Philadelphia (now a part of the University of Pennsylvania School of Medicine) in 1896, following which he served as resident physician at the Medico-Chirurgical Hospital in Philadelphia. He spent two years studying in Vienna, Berlin, and London before returning to Washington to begin his practice in 1899.

Dr. Polkinhorn confined his practice to diseases of the eye, ear, nose and throat. His offices were in the Washington Medical Building, but for the last year and a half he had maintained offices in his home at 1639 Harvard Street, N.W.

He was formerly on the staff of Providence, Doctors, and Episcopal Eye, Ear and Throat Hospitals and ophthalmologist to St. Ann's Infant Asylum, the Methodist Home for Women, and the Presbyterian Home for Aged Women.

A Life member of the Medical Society of the District of Columbia, he became affiliated with the Medical Association in 1899 and with the Medical Society in 1900. He was a member of the American Medical Association.

He was active in the work of the Metropolitan Methodist Church and had served on its Board for many years. He was a member of the Benjamin B. French Lodge No. 15 of the Masons.

Surviving him is his wife, Mrs. Mary Lemon Polkinhorn; a son, John Henry Polkinhorn, who lives at Woodley Park Towers; and a sister, Mrs. Florence Affleck, of New York City.

PIERRE J. RABIL, B.A., B.Sc., M.D.

(1912–1956)

Dr. Pierre J. Rabil, Assistant Professor in Surgery, Georgetown University School of Medicine, died at Georgetown Hospital, July 23, 1956, following a short illness. He lived at 3805 T Street, N.W.

Dr. Rabil was born in Roanoke, Virginia, in 1912. He received the degrees of Bachelor of Arts and Bachelor of Science from the Lycée Louis Le Grand in Paris and his medical training at Montreal University. Postgraduate study included a year at the Mayo Foundation and Clinic.

Dr. Rabil came to Georgetown in 1953 as a Fellow in Cardiovascular Surgery. After receiving his Ph.D. degree from the University in 1954, he was appointed Assistant Professor in Surgery.

A veteran of World War II, he served in the Medical Corps of the U. S. Army, European theater, earning the Bronze Star, Purple Heart, Legion of Honor, and Croix de Guerre. He was discharged as Lieutenant Colonel in 1948, and conducted private surgical practice in Montreal until 1952.

Dr. Rabil was a member of the Canadian Medical Association, the American Heart Association, and the American Federation for Clinical Research.

Dr. Rabil was unmarried. He leaves a sister, Mrs. Jean Shelby, and a brother, Emil Rabil, in Goldsboro, North Carolina.

Radioiodine in Thyroid Disease—King

(Continued from page 484)

14. Clark, D. E., and Rule, J. H.: J.A.M.A., 1955, **159**, 995.
15. King, E. R., and others: U.S. Armed Forces M. J., 1954, **5**, 186.
16. Sokal, J. E.: New England J. Med., 1953, **249**, 393.
17. Majorakis, J., Slaughter, D. L., and Cole, W. H., in Tr. Am. Goiter A., 1953. Springfield, Ill.: Thomas, 1954.
18. Kramer, S., Concannon, J. P., Evans, H. D., and Clark, G. M.: Brit. J. Radiol., 1955, **28**, 307.
19. Cunningham, R. M., Hilton, G., and Pochin, E. E.: Ibid., 1955, **28**, 252.
20. McDermott, W. V., Morgan, W. S., Hamlin, E., and Cope, O., in Tr. Am. Goiter A., 1954. Springfield, Ill.: Thomas, 1955.

Ritalin for Mild Depressions—Jacobson

(Continued from page 494)

Ritalin was useful in counteracting the lethargy or oversedation of ataraxic drugs. A combination of Ritalin with an ataraxic drug appeared to be of value in therapy.

Use of Ritalin with a limited number of tense, agitated schizophrenics was disappointing.

Effective dosage ranges in patients with depression vary between 30 and 120 mg. daily;

when ataraxics are used the range is 10 to 60 mg. daily.

Further clinical trial of this preparation should be undertaken, particularly in narcolepsy and as an adjunct in the management of certain types of epilepsy.

BIBLIOGRAPHY

1. Ferguson, J. T.: Treatment of reserpine-induced depression with a new analeptic: phenidylate. Ann. New York Acad. Sc., 1955, **61,** 101.
2. Ferguson, J. T., and Funderburk, W. H.: Improving senile behavior with reserpine and Ritalin. J.A.M.A., 1956, **160,** 259.
3. Meier, R., Gross, F., and Tripod, J.: Ritalin, a new synthetic compound with specific analeptic components. Klin. Wchnschr., 1954, **32,** 445.
4. Schneider, J. A., and Holden, T.: Personal communication.

Pain in Osteoarthritis—Mennell

(*Continued from page 501*)

a painful joint with lactic acid, the amount varying with the size of the joint, the maximum being 8 c.c. for the hip joint, and (2) manipulating the joint while the joint is analgesic and cushioned, and while the capsule is stretched. This combination of therapies has proved most satisfactory in relieving painful arthritic joints for prolonged periods.

Finally, the prophylactic management of cases of osteoarthritis is outlined, such management being designed to prevent recurrences of pain and to protect the involved joints from further wear and tear which will lead to a progression of the joint changes which, in their grossest forms, may eventually become the primary cause of pain, the only satisfactory treatment for which is then joint fusion.

Acknowledgment: The illustrations in this paper appeared earlier in an article entitled "Manipulation and Treatment of Pain in the Chest," by the author, published in the *New Zealand Medical Journal*, 1948, **47,** 586, and he is grateful for permission to reproduce them in this publication.

2500 Wisconsin Avenue, N. W.
Washington 7, D. C.

Status of Medical Neurology—Forster

(*Continued from page 517*)

length to allow him to become acquainted with his duties, to discharge them capably, and to be able to tutor his successor as he moves to a higher echelon in the Society. In most medical societies this is customarily the secretary. Therefore, it would seem most wise to me if this society established a precedent much as that of its father-figure society, the Section of the AMA, and held the Secretary in office for a term usually not less than 3 years. This is essentially the phraseology used in the Section on Nervous and Mental Diseases; the word "usually" is used so that an inept Secretary can be relieved after 1 year and not less than 3, indicating that occasionally a very capable secretary may be held over another year.

I hope that you will accept these suggestions, and I want you, the members of this Section, to know how proud I am to have been able to serve as your Chairman during the past year.

On the Lighter Side—Kadan

(*Continued from page 518*)

Dr. Montgomery said that an ordinary lynx will bring $500 per pelt. There is also a club prize of $1,000 and at the end of the hunting season there is a $10,000 prize for the hunter who bags the largest lynx with bow and arrow.

In Maryland, Virginia, West Virginia and Pennsylvania bounties are paid mostly for bringing in chicken-hawks. A bow-and-arrow hunter needs a license to hunt deer and other animals, but varmints can be killed without permission and the authorities will pat you on the back for every grey fox you destroy. It seems that the fox has been spreading rabies, and that isn't good.

This bow-and-arrow hunting seems real interesting, especially after talking to Dr. Montgomery about it; and if I can find my buckskin shirt and hide-fringed moccasins I am going to take up Dr. Montgomery's invitation to go bow-and-arrow bear hunting with him one of these days. Bob says that I do not need the moccasins to hunt bear, but I say, "Yes, I do, brother, because I can run faster in moccasins."

J. Earl Kadan, M.D.

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *October*, 1956 NUMBER 10

MANAGEMENT OF DIABETES MELLITUS WITH ORINASE*

A Preliminary Report

SAMUEL J. N. SUGAR, M.D.
Associate in Medicine, George Washington University School of Medicine
LEON R. LEVITSKY, M.D.
Mt. Rainier, Maryland
TILL BERGEMANN, M.D.
Cheverly, Maryland

REPORTS of successful control of selected cases of diabetes with oral hypoglycemic agents began to appear in the German medical literature in 1955.[1, 2] One of these compounds, BZ 55, called Carbutamide in this country, is 1-butyl-3-p-aminobenzenesulfonylurea. A preliminary report by Ridolfo and Kirtley[3] indicated that this compound should be useful in the control of some cases of mild or moderately severe diabetes. Another and similar sulfonamide derivative, 1-butyl-3-p-tolylsulfonylurea, has been designated Orinase.†

Mirsky et al[4] found this compound to be more potent than Carbutamide in the production of hypoglycemia and insulinase inhibition in the rat. The action of Orinase as proposed by Mirsky, Diengott and Dolger[5] is "to decrease the destruction of endogenous insulin with a consequent increase in the availability of insulin." Miller and Dulin[6] have shown a difference in action between Orinase and insulin. In Orinase-treated animals liver glycogen was increased and muscle glycogen unchanged, whereas with insulin there was no change in liver glycogen and muscle glycogen was increased. These findings indicate the liver is a primary site of drug action. Kinsell, Brown et al[7] in precisely controlled studies on severe diabetics achieved results suggesting a primary effect on fat oxidation.

Orinase is quickly absorbed. In normal fasting dogs given a single oral dose of 50 mg. per kg. a 25 per cent fall in blood sugar is seen within 2 hours (figure 1). The lowest values of 35 per cent reduction are reached within 4 to 8 hours and maintained for 24 hours. Miller and Dulin[6] determined the plasma level in dogs and found 10 per cent of the dose in the plasma at peak levels. The time required to clear the plasma after a dose of 25 mg. per kg. was 48 hours.

---

* From the Medical Department of Prince Georges General Hospital, Cheverly, Maryland.

† The Orinase used in this study was supplied through the courtesy of Dr. C. J. O'Donovan of Upjohn Company, Kalamazoo, Michigan.

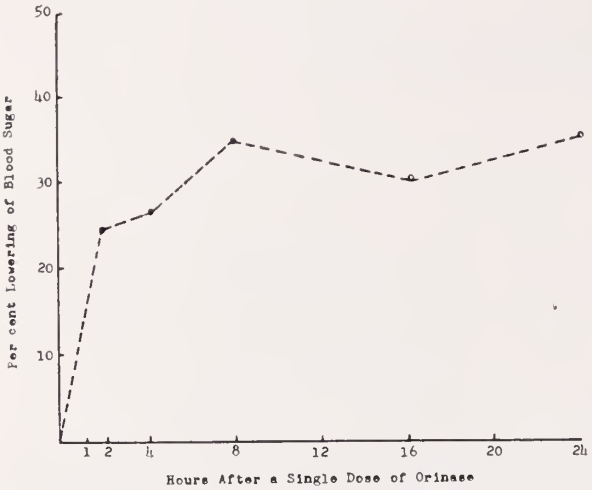


Fig. 1. Average per cent lowering of blood sugar in dogs after a single dose of Orinase, 50 mg./kg.

The present report includes 24 hospitalized and 14 ambulatory patients. Only those patients who had been taking insulin or who were inadequately controlled on diet alone were used in the study.

Method of Study

In those patients previously controlled on depot insulin Orinase was started 24 hours after the last dose of insulin. An initial 'priming' dose of 2.5 Gm. was followed in 24 hours by 1.5 Gm., and a maintenance dose of 1 Gm. was given every morning thereafter. Occasionally the dosage was varied when control was difficult. In the average successful case 1 Gm. (2 tablets) was sufficient as a daily dose. In the hospitalized patients fasting blood sugar and 24-hour quantitative urine sugar were estimated daily.[8] In addition, qualitative tests for sugar and acetone in the urine were made before meals and at bedtime. In this way we were able to discover ketonuria quickly and to resume insulin therapy when needed. Diet was maintained at optimal caloric requirements. Occasionally blood sugar values were determined 1 or 2 hours after eating to measure effectiveness of control. After 1 week's observation on the wards patients were discharged and followed in the outpatient clinic at gradually increasing intervals. Instructions for testing and recording fractional urinalyses at home were given, and on return to the clinic these tests as well as that day's blood sugar were scrutinized for estimating degree of control.

TABLE 1

Patients Satisfactorily Controlled with Orinase after Discontinuing Insulin

Patient	Age	Duration of Diabetes, Years	Insulin Before, Units	Orinase Dose, Gm./Day	Average Blood Sugar (Fasting) under		Duration of Treatment, Weeks
					Insulin	Orinase	
1	50	2	75	1	230	200	12
2	64	13	30	1	130	140	11
3	42	½	70	1	165	175	11
4	50	1	30	2	166	160	8
5	49	1	20	2	200	174	8
6	61	5	20	1	146	181	8
7	43	9	20	2	243	176	8
8	61	3	45	1	240	150	8
9	66	13	30	1	330	110	8
10	70	6	25	1	145	101	6
11	60	1	30	1	203	158	8
12	60	6	15	1	237	183	7
13	60	25	12	1	223	206	5
14	52	4	50	1	266	200	5
15	66	25	30	1	79	120	4
16	71	7	40	2	340	192	5
17	67	13	15	1	145	140	3
18	65	4	20	1	93	87	2
19	47	23	55	1	150	185	1
20	56	5	30	1	214	127	1

Orinase effectiveness was considered satisfactory if the daily excretion of sugar in the urine was kept below 15 Gm. and the fasting blood sugar below 200 mg. per ml. of blood. Those patients not initially hospitalized were given the same dose schedule. Particular emphasis was made on testing the urine for acetone, and resumption of insulin therapy was made mandatory at the first sign of ketosis.

RESULTS

TABLE 2

Patients Satisfactorily Managed with Orinase Not Previously Controlled with Diet Alone

Patient	Age	Duration of Diabetes, Years	Orinase Dose, Gm./Day	Average Blood Sugar (Fasting) under		Duration of Treatment, Weeks
				Diet	Orinase	
1	30	3/12	1	220	110	11
2	40	1/12	1*	165	74	8
3	47	2/12	2	256	210	8
4	60	4	1	214	158	5
5	64	5	1	270	185	6
6	72	1/12	1	390	178	7
7	62	1	1	206	122	6
8	39†	1	1	147	123	5
9	70	9	1	203	155	2

* This patient would not adhere to diet at home before taking Orinase. After taking medication for 4 weeks it was discontinued. Blood sugar 3 weeks later was 79.

† This patient had taken odd amounts of insulin at infrequent intervals and on one occasion had a blood sugar over 300.

TABLE 3

Cases Previously Controlled with Insulin Not Satisfactorily Managed with Orinase

Patient	Age	Duration of Diabetes, Years	Insulin Before, Units	Orinase Dose, Gm./Day	Average Blood Sugar (Fasting) under		Duration of Treatment, Days
					Insulin	Orinase	
1	67	5	35	2 to 4	350	400	12
2	20	7	80	2	225	225	6
3	45	3	30	1	155	185	4
4	13	New	35	2½	70	300	5
5	70	10	35	1½	325	350	4
6	35	7	30	1	150	340	3
7	53	4	120	1	413	380	5
8	46	2/12	0	1	386	358	14
9	48	6	60	1	133	375	3

All patients except no. 8 developed ketonuria when taken off insulin.

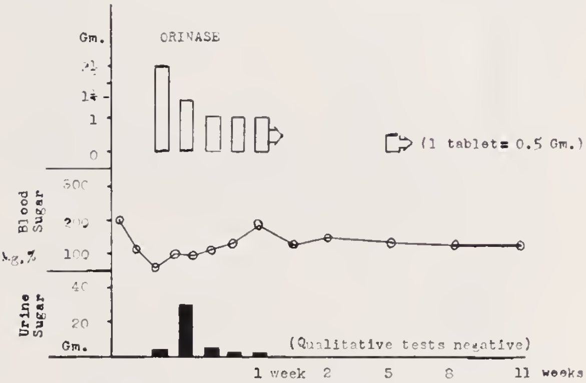


FIG. 2. Diabetes complicated by pregnancy. Inadequate control on diet. Satisfactory management with Orinase.

The over-all results of therapy with Orinase in this group of patients are presented in tables 1, 2 and 3. Twenty-nine patients (76 per cent) showed adequate control as measured by the criteria mentioned above. One patient inadvertently took 0.5 Gm. (1 tablet) daily and yet remained well controlled. Several patients who had been taking moderate to large doses of insulin for several years were so easily managed with Orinase that it made us wonder if these patients actually needed insulin. A study to determine this fact is under way. Of the 9 failures (24 per cent) 5 were "juvenile" type diabetics, with marked insulin sensitivity and a pronounced tendency to acidosis. Nine patients had not previously taken insulin for a variety of reasons, usually fear of injections or relatively recentness of onset of diabetes. These patients were quite easily controlled with Orinase. One of these (figure 2) became pregnant soon after her diabetes was discovered. This added burden was manifested by increasing hyperglycemia and glycosuria which diet alone failed to modify. To date, on Orinase her condition (pregnancy and diabetes) is quite satisfactory. Another patient (figure 3) with hypertension was referred because of lack of control and refusal to take insulin. After 3 weeks of Orinase therapy the patient ran out of tablets. Three days later the blood sugar was 71 mg. per 100 ml. and the urine was free of sugar. He has remained in good control for 2 months since his last dose of Orinase. Progressive improvement was noted in 2 cases when the dose was increased to 2 Gm. daily (figures 4 and 5). In 2 of the failures a progressive increase in glycosuria was noted even though no marked change in blood sugar level was seen. The elimination of as much as 500 Gm. of glucose in 24 hours was startling (figures 6 and 7). It would seem that in some individuals Orinase has a tendency to lower the renal threshold for glucose. One patient who had taken 25 units of depot insulin for several years was well controlled on Orinase immediately after surgical excision of a hydrocele (figure 8).

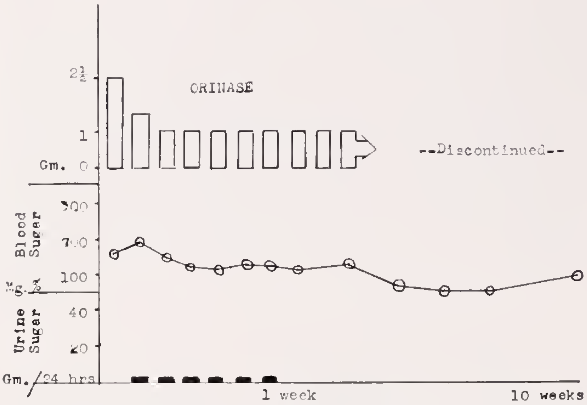


FIG. 3. Excellent control with Orinase persisting 2 months after discontinuing medication.

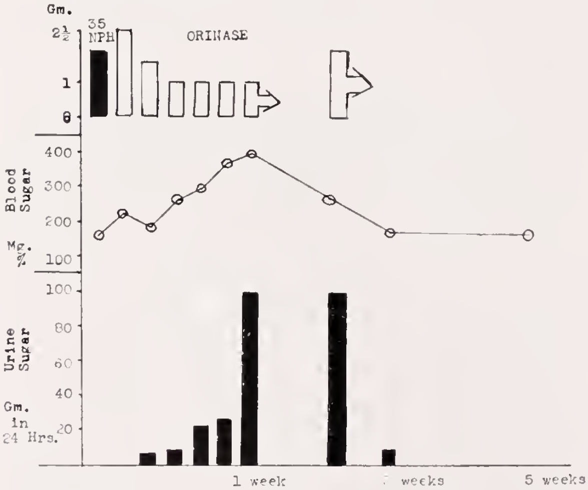


FIG. 4. Patient controlled after increasing Orinase to 2 Gm. daily.

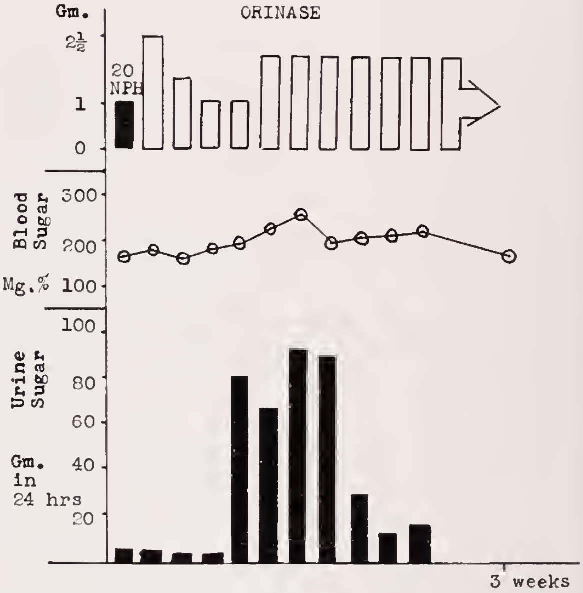


FIG. 5. Gradual improvement in control after increasing dose of Orinase to 4 tablets daily.

TOXICITY

Of the patients studied only mild side-reactions were noted (table 4). One was a localized area of macular rash on the left wrist. This cleared overnight after administration of an antihistamine. It reappeared on the forehead but was not disabling and did not require cessation of therapy. One case of generalized itching without rash and a third with intercostal neuralgia were observed. All these complaints were mild. Four patients complained of typical hypoglycemic symptoms before the noon meal (anxiety, hunger, and sweating). Blood sugar levels at this time were at lower limits of normal, but food ingestion gave prompt relief. No aggravation of preëxisting retinopathy, hypertension, or pyelonephritis was observed. In fact, one patient with painful burning feet noted relief soon after Orinase was started. Body weight remained unchanged during treatment. The most frequent side-effects noted by German investigators were urticaria and diarrhea. No unusual effects on blood, urine,

TABLE 4

Side-reactions to Orinase

	No. of Patients
Maculopapular rash (mild and evanescent)	3
Itching	1
Intercostal neuralgia (1 week)	1
Hypoglycemic symptoms (anxiety, hunger, sweating) relieved by eating	4
Total	9

Number of patients treated—38.

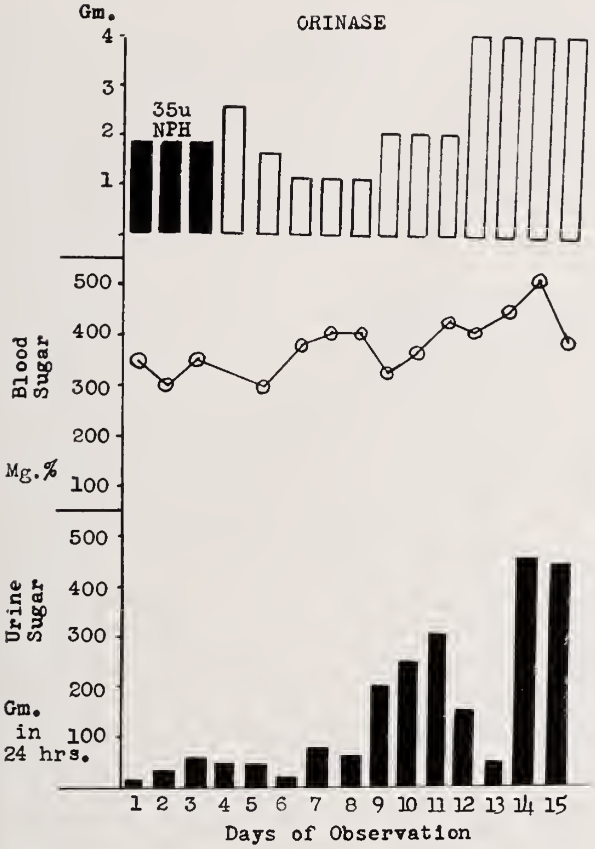


FIG. 6. Fair control with insulin. Poor control with Orinase. Marked glycosuria.

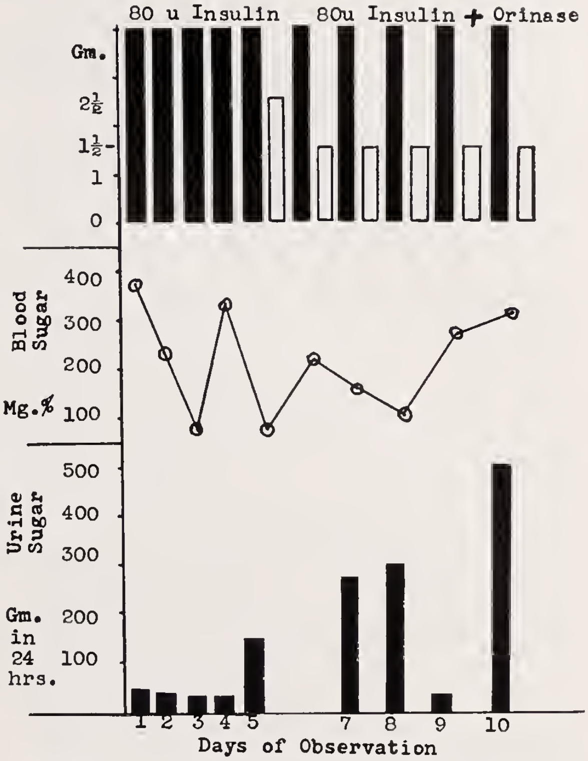


FIG. 7. Poor control with insulin alone. No improvement with added Orinase. Marked glycosuria following Orinase.

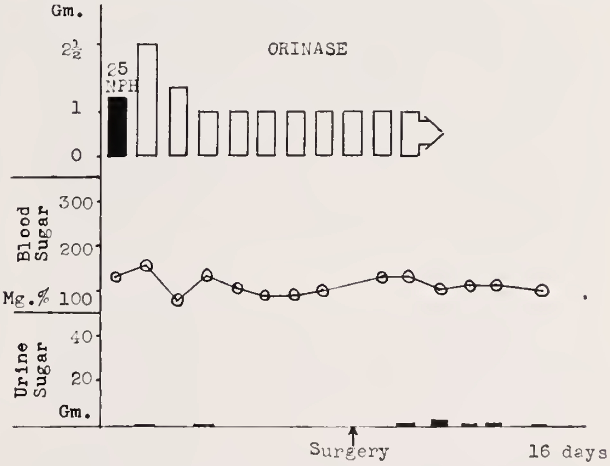


FIG. 8. Excellent control with Orinase. Maintained before and after excision of hydrocele.

thyroid, or liver have been noted to date. The longest period of observation has been 3 months.

CONCLUSIONS

Although the number of cases reported here is too few and the period of observation too short for statistical evaluation, the following facts are noteworthy:

1. Many adult diabetics requiring daily insulin injections were controlled satisfactorily with Orinase alone.
2. Best success was noted in adults whose diabetes was of recent onset and mild enough to require only small doses of insulin. These patients could be controlled on an ambulatory basis.
3. Unstable diabetics of any age are poor candidates for control with Orinase.
4. Orinase is not an insulin substitute. When evidence of ketosis appears insulin must be used.
5. Toxicity to Orinase is low. Its exact mode of action is not completely known. Experimental evidence indicates a prevention of destruction of insulin in the liver.

(*Continued on page 585*)

THE DIAGNOSIS AND TREATMENT OF NODULAR GOITER AND THYROID CANCER

A Panel Discussion*

Moderator
THEODORE WINSHIP, M.D.
Senior Attending Pathologist, Garfield Memorial Hospital, Washington
Participants
GEORGE CRILE, JR., M.D., F.A.C.S.
Department of Surgery, Cleveland Clinic, Cleveland
EDGAR L. FRAZELL, M.D., F.A.C.S.
Associate Attending Surgeon, Head and Neck Service, Memorial Center, New York
CALVIN T. KLOPP, M.D., F.A.C.S.
Assistant Clinical Professor of Surgery, George Washington University School of Medicine
JOHN C. McCLINTOCK, M.D., F.A.C.S.
Assistant Clinical Professor of Surgery, Albany Medical College
with remarks by
BENEDICT J. DUFFY, JR., M.D.
Director, Isotope Laboratory, Georgetown University Hospital, Washington

Dr. Winship: The questions to be asked concern controversial features of the diagnosis and treatment of nodular goiter and thyroid carcinoma. We are fortunate in having, as invited guests, 4 distinguished surgeons from different parts of the country, each with different ideas, but all particularly interested in thyroid surgery. These gentlemen have not seen the prepared list of questions.

The classification to be used here is that adopted by a special committee of the American Goiter Association. The committee recommended the use of the terms "toxic diffuse" or "toxic nodular" goiters and "nontoxic diffuse" or "nontoxic nodular" goiters.[1]

Moderator: *What is known about the cause of thyroid cancer?*

Dr. Crile: Very little is known that is accepted. I have a very strong feeling that one of the aggravating causes is an excess of thyrotropic hormone.

Dr. Frazell: Practically nothing is known.

Dr. Klopp: The one thing that interests me in this connection is the increasing incidence of thyroid cancer following previous irradiation to the area of the thyroid. I think it is something that we cannot neglect as a possible cause.[2-5]

Dr. McClintock: I think it is obvious that the etiology of cancer of the thyroid is not yet known.

Dr. Crile: I think the implication has been that irradiation to the thyroid area has been directly carcinogenic because of the effect of the irradiation on the thyroid cells. However, review of any of these series of cases will show that many of these children who subsequently developed cancer of the thyroid have had irradiation to such organs as tonsils, thymus, or areas sometimes out of the thyroid field. I wonder whether the common factor is that these children had lymphoid hyperplasia, and whether this is an expression of a diathesis, indicating an excess of thyrotropic hormone.

---

* Presented at the Fifth Midwinter Seminar of the Medical Society of the District of Columbia in Washington, D. C., February 16, 1956.

DR. KLOPP: There is an increasing number of patients with cancer of the thyroid seen in the age range 30 to 40 years who have had irradiation to the skin of the face, neck and chest for acne in the teens. It is hard to associate such a group with lymphoid hyperplasia.

DR. WINSHIP: The reason this question was asked is that it has recently been reported that 20 per cent of the children with thyroid carcinoma have received irradiation to the region of the neck during infancy.[6]

MODERATOR: *Do you think that the incidence of thyroid carcinoma is increasing?*

DR. CRILE: Diagnosed carcinoma is increasing enormously.

DR. FRAZELL: One hardly knows whether this reflects the experience of the country at large, but at the Memorial Hospital we are seeing approximately 70 new cases of thyroid cancer annually, and this is a great increase over former years.

DR. MCCLINTOCK: The frequency with which we are encountering cancer of the thyroid is definitely increasing, and I believe it is greater than the over-all population increase.

DR. DUFFY: Statistics from the New York State Department of Health show that the incidence of thyroid carcinoma has doubled during the period 1940 to 1950, as compared to the previous decade. During that same period the increase in other forms of cancer, except for lung cancer, has in no way paralleled this rather remarkable increase.

DR. WINSHIP: An increase has also been reported from several large clinics.[7]

MODERATOR: *Which nontoxic nodular goiters are surgical entities?*

DR. CRILE: The ones which give symptoms or by their clinical characteristics arouse suspicion.

DR. FRAZELL: I see no reason to believe that the indications for the surgical extirpation of the thyroid nodules has changed from what it was in former years. A thyroid nodule is like a breast nodule; when it has become clinically significant, then it is surgical.

DR. KLOPP: At least in this geographical area, any nontoxic nodular goiter which presents as a palpable nodule or nodules is a surgical problem.

DR. MCCLINTOCK: I am in agreement with that point of view. I believe that all nodular goiters are surgical entities.

MODERATOR: Dr. Crile, do you have anything more to add?

DR. CRILE: Nothing, except that I could not possibly disagree more wholeheartedly. I do not believe the geographic area is important any more, because we eat your seaboard food and there is a wide distribution of iodized salt. I think there is a quite equable distribution of nodular goiter in all parts of the country today, and I think about 5 per cent of older people have them. That would amount to a pretty big operating schedule.

DR. FRAZELL: In addition to the rather marked increase in the number of thyroid nodules that we have seen at Memorial Hospital, I have the distinct impression that we are seeing more primary cancers of the thyroid today which prove on exploration to be inoperable than we saw formerly. I think it is tragic for physicians to tell their patients, if the nodule in the thyroid does not bother them, not to bother it.

DR. DUFFY: I have a question from the floor for Dr. Frazell. What makes a thyroid nodule of clinical significance?

DR. FRAZELL: I think that every surgeon has to decide that for himself. I once asked Dr. Frank Foote, our pathologist, when he thought we ought to stop removing asymptomatic, nontoxic thyroid nodules. He suggested that perhaps we could draw an analogy between thyroid and breast nodules, adding that if we took out more than 10 non-malignant nodules to 1 cancer perhaps we were removing too many nodules. We have never approached that ratio in thyroid nodules. I think that when a nodule is palpable and measures 2 or 3 cm. it is of clinical significance.

MODERATOR: *What is your percentage of carcinoma in nontoxic nodular goiters?*

DR. CRILE: It averages approximately 8 per cent in nontoxic nodular goiters and 25 per cent in solitary nodules.

DR. FRAZELL: No one knows the answer because figures can be twisted to mean almost anything. I do not believe the answer is going to come with any degree of accuracy in the immediate future.

DR. KLOPP: At George Washington University Hospital 10 per cent of all nontoxic nodular goiters have been found on removal to contain a carcinoma.

DR. MCCLINTOCK: Over a 7-year period we have had 2 per cent of unsuspected cancers first diagnosed by the pathologist in the nontoxic nodular group, and 8 per cent in the single nodules. These figures have some significance if one believes that all nodular goiters that come to the surgeon are surgical entities and operates upon more than 95 per cent of the patients with them, as I do. This represents a fairly large consecutive series of nodular goiters.

DR. CRILE: May I ask the chairman a question? In what percentage of thyroids in autopsies on adults do you find nodules? Do you ever find one that is not nodular?

DR. WINSHIP: Only 20 per cent of our last 1,300 adult autopsies had nontoxic nodular goiters, and 4 per cent had thyroid adenomas.

DR. CRILE: You will find a higher incidence of cancer of the thyroid in those who have nodular goiters because the cause of the nodularity and the activation of the thyroid carcinoma are identical—an excess of thyrotropic hormone. Furthermore, thyroids are exactly like prostates; 25 per cent of the men over 50 have microscopic cancer of the prostate, and 3 per cent of people of all age groups reveal cancer of the thyroid at routine autopsy.[8]

MODERATOR: *What is the percentage of carcinoma in single nodules?*

DR. FRAZELL: Cancers were found in nodules that were said to be solitary in 10 per cent of the cases, and in multiple nodules 12 per cent. This is selected material.

DR. KLOPP: I found that these figures were impossible to get. Often if I decided there was a single nodule, I would read the hospital record and find that 2 people disagreed with me. Or, if I thought there were 2, I would find there was only 1 on the hospital record. The only way one can evaluate this is in terms of an individual examiner, and he would have to set up his study in advance. One cannot trust records.

MODERATOR: Dr. McClintock, you see all your own patients and operate on them all. Do you have some figures on this?

DR. MCCLINTOCK: I have made notes at the time of the operation of a single tumor and the pathologist reports multiple nodules, but in a high percentage of cases he diagnoses fetal adenoma. In other words, there are both a single tumor and multiple nodules. In those cases in which the singularity of the tumor has been established, my cases show about 8 per cent cancer.

MODERATOR: *Do you believe that carcinomas arise in adenomas, and, if so, in what particular type of adenoma?*

DR. CRILE: I have never seen a tumor of the thyroid which was half carcinoma and half adenoma. I have never caught one in the transition stage. The adenomas I have seen are homogeneous, and I believe most people are coming to the point of view that the involutionary type of adenoma, the common one in the older people, can hardly be called a premalignant lesion.

DR. FRAZELL: Occasionally our reports read "adenoma containing a very small carcinoma"; the pathologists always qualify it by saying "some evidence suggesting having arisen from an adenoma." These reports come through very rarely, and Dr. Stewart and Dr. Foote have some fundamental doubts about the origin of thyroid cancer in adenomas.

DR. KLOPP: My personal belief is that cancer is a cancer from the outset and an adenoma is an adenoma from the outset and that one does not change into the other, but I cannot prove it.

DR. MCCLINTOCK: I am not sure that I can prove it either. I have seen nodules in which there was only a very small portion that presented any evidence of malignancy, but I think we must accept the fact until proved otherwise that cancer is such from the beginning and treat it accordingly.

MODERATOR: *What medical treatment do you recommend for nontoxic nodular goiters?*

DR. CRILE: We have been treating practically all of our small nodular goiters with desiccated thyroid. I think probably all of us, given a patient who walks into the office with a nodule that can be seen as he walks in, will advise its removal. I am talking about the one who has been frightened to death because some doctor who examined the thyroid and found a lump in it, of which she was totally unaware, and which can scarcely be seen or felt, told her there is a 10 per cent chance that she has cancer. I do not treat such patients surgically unless they are very young or have very suspicious lesions. I merely put them on 3 grains of desiccated thyroid daily, which they tolerate well because their own thyroid stops working. This treatment suppresses thyrotropic stimulation, and the vast majority of these glands get smaller, or at least do not enlarge. I have been using this method of therapy now for 3 or 4 years.

DR. FRAZELL: I do not think the surgical indications have changed, and therefore I do not treat them medically. I have had the unfortunate privilege of operating on the wives of 3 of our surgical residents. The nodules were all discovered accidentally, and all proved to be carcinoma. In no instance did I recognize preoperatively that the lesion was cancerous.

DR. KLOPP: I think the medical treatment of a thyroid nodule is to refer the patient to a surgeon. I should like to ask another question of Dr. Crile. I would agree with him that the nodules in young people are much more serious than in middle-aged people, but did he mean to imply that clinically he can differentiate between a cancer and a benign tumor in an older person?

DR. CRILE: No, one cannot distinguish a benign tumor from a malignant one in anyone after the age of 45 when the involuntary nodules become large enough and common enough to be the rule. It is exactly the same as a lump in the breast in a girl in her twenties. If it is round and discrete, it is almost certainly a fibroadenoma, whereas, beyond the menopause, if it is infiltrating, it is almost certainly carcinoma. Within these wide limits there is, of course, a very difficult clinical zone of differentiation. I think usually, with experience, one can recognize most thyroid cancers. We have had 90 per cent accuracy in preoperative diagnosis, or a favored diagnosis of carcinoma.

DR. FRAZELL: Most people do not seem to be able to achieve a 90 per cent accuracy, but upon closer examination of that figure one will find that somewhere between 40 and 50 per cent of these patients have been referred after having had a node excised before they came. About another 20 per cent have lymph nodes that are obviously metastatic thyroid carcinoma in the presence of a palpable thyroid nodule, and others, obviously, are going to be advanced thyroid cancer. On the other hand, when the patient comes in with a completely asymptomatic thyroid nodule without nodes in the neck, without tracheal deviation, and without palsy of the larynx, the diagnosis is often in doubt. Most surgeons say that about 50 per cent of their cancers of the thyroid come to the table undiagnosed as such.

DR. MCCLINTOCK: My answer to this question is that nodules in the thyroid are still surgical entities and not medical.

DR. KLOPP: May I ask Dr. Crile a question? What do you tell patients with a nodular goiter when you decide not to operate?

DR. CRILE: These are not goiters that are discovered by the patients; these are asymptomatic, "doctor-made" goiters, because the doctor just examined the patients carefully and found them. I tell them that it is no different from having gray hair; one may expect it at that age.

MODERATOR: *What treatment do you recommend for single nodules?*

DR. CRILE: Again, it all depends on the age. If the patient is an old lady of 70 and has had the nodule for years, it makes no difference whether it is a cancer or not, because this is the kind of cancer always there, and she can keep it another 30 years if she wants to live to be 100. If she is a young woman, I treat it as if it were known cancer and excise it completely.

DR. FRAZELL: Some of the most tragic cases I have seen are elderly people who had been given that advice for the last 10 years, and then they come in with one side of their larynx paralyzed. These people are having difficulty now, and they know they have a thyroid nodule, and not many of them are going to let you pass it off like gray hair. They are going to demand that something be done about it; and so often when one tries to do something for it, he fails. Often these are the people who come in with pulmonary and bone metastases. We have seen it growing into the jugular vein and then try to take it out. Who has the right to say whether a woman of 65 or even 70 should not have a surgical attempt made to extirpate her lesion and be allowed to live her expected natural span. It is a matter of philosophy, of course, but I think these people should be offered a chance to have surgical removal of these lesions.

DR. CRILE: Are you talking about the incidentally found nodule of which the patient is unaware, or are you talking about a lady who comes in complaining because something has happened to her neck, giving her symptoms or showing an obvious nodule?

DR. FRAZELL: It is a matter of timing. The nodule was found and disregarded 10 years before. Do you not think that the physician who discovered it might have been doing his patient a good turn if he had advised its removal then?

DR. CRILE: We are granting now a mortality rate of 1 in 1,000, which is as good as the average surgeon can accomplish. And, if one operates on every patient that comes into his office with a nodule in the thyroid, he will have killed about 25 more patients than would have died of that disease.

DR. KLOPP: We treat single nodules just as we would treat multiple nodules. Our anesthetists tell me that their "batting average" for good-risk patients is considerably better than 1 in 10,000, not 1 in 1,000.

DR. MCCLINTOCK: Lobectomy is my procedure of choice for the treatment of clinically single nodules. The over-all mortality statistics that I have for the past 10 years is 1 fatal cerebral vascular accident in over 2,000 operations.

MODERATOR: *Do you think enucleation or wedge resection is a justifiable procedure for the removal of a single nodule?*

DR. CRILE: There is no question in my mind that the most pernicious thing that a surgeon can do is to enucleate any lesion that has any chance whatsoever of being cancer of the thyroid, because it is just as implantable, if not more so, than cancer of the breast.

DR. FRAZELL: A great many patients are referred to Memorial Hospital after the surgeon has done an enucleation of an "adenoma" and found, much to his surprise, that it was cancer. We have found residual cancer in the lobe in approximately 50 per cent of these cases. We have taken the attitude that as long as we were in the neck, this being the second time around, that we ought to do a neck dissection. We found cancer either in the lobe or in the nodes or in both in something like 90 per cent of the cases. That experience has led us to believe and confirm what Dr. Crile has felt, that the enucleation of solitary nodules is wrong. We have limited material on which to base the figures, but we think that about 15 per cent of our material will show multiple foci of cancer in the contralateral lobe. We know there are multiple foci in the homolateral lobe, but the incidence of bilateral nerve palsy is distressingly high, and the incidence of parathyroid deficiency after total thyroidectomy is also considerable. These are complications not to be taken lightly; therefore, if we find nodules in both lobes, we do one lobe completely and try to leave a little thyroid tissue on the other side, recognizing full well that we are not doing, from a theoretical point of view at least, as good an operation as we should, but we are trying to protect the patient.

DR. KLOPP: I do not think that enucleation is ever justified. I think one ought always to excise some normal thyroid tissue around the nodules.

DR. MCCLINTOCK: The panel seems to be in complete agreement on this question. I think it is possible at times, when there is a relatively small nodule, say in the superior pole, to resect a portion of that lobe, leaving perhaps some normal tissue at the opposite pole. We do a wide excision and cut across the tumor after it is out, and if it is grossly suspicious remove the remainder of that lobe. Enucleation certainly has no place in the treatment of single nodules.

MODERATOR: *What about a nodule in the isthmus?*

DR. CRILE: I think a subtotal thyroidectomy is indicated, with plenty of tissue left on both sides. I agree with Dr. McClintock that there are many very small, localized nodules at one pole in which one does not have to take out the whole lobe, although that is usually just as easy.

(The other panelists agreed.)

MODERATOR: *Do you always visualize the recurrent laryngeal nerve in performing a lobectomy?*

DR. CRILE: Yes, because otherwise one would not have the courage to do it. He would injure nearly 10 per cent of them.

DR. KLOPP: I agree, but again I think we ought to point out that when we say "always" we never mean it. I doubt that we visualize the recurrent nerve when we perform an excision of a nodule in the isthmus; in fact, I know I do not.

DR. MCCLINTOCK: It is important not only to visualize the nerve when doing a lobectomy, but one must dissect out its entire course in the neck.

MODERATOR: *Do you request frozen sections on suspicious lesions?*

DR. CRILE: I do very frequently, so that I can give the family an idea of the diagnosis, but I find that they are not really helpful. The trouble is that the papillary group and the more malignant types are usually perfectly obvious grossly and from the clinical history. The pathologists cannot establish angio-invasion on frozen section in the group of encapsuled angio-invasive carcinomas.

DR. FRAZELL: Since we practice routine neck dissections on the homolateral side when we have a diagnosis of cancer of one lobe of the thyroid, we find that frozen section helps us a great deal. We believe that if one is to do a neck dissection, the time to do it is at the initial procedure, because neck dissection at a later date is never entirely satisfactory. We believe that we should have some confirmation by the pathologist before we embark on a neck dissection. Very rarely have the pathologists given us a wrong diagnosis; they may have called a cancer benign, but very rarely have they done the reverse. We depend upon frozen section a great deal, and it is routine in our hospital.

DR. KLOPP: I am afraid I am not too good at recognizing cancer grossly; so I rely on the frozen section in any instance in which the knowledge of carcinoma would alter my surgical procedure.

DR. MCCLINTOCK: I rarely use a frozen section because of the difficulties encountered in making a definitive diagnosis even on paraffin sections and because pathologists themselves often disagree when examining the same slide, particularly in the papillary lesions. I think it depends a great deal upon the skill and experience of the pathologist and the way in which the surgeon has been brought up to accept the frozen section.

DR. WINSHIP: Dr. Lahey used to stress the value of frozen sections and has stated that the accuracy in his clinic is 95 per cent.[9] Since that time I have learned that several other institutions are doing equally well.

MODERATOR: *Do you alter your treatment of a patient with thyroid carcinoma because of age?*

DR. CRILE: Dr. Winship has pointed out very clearly the danger of thyroid cancer in the young, and I have come to agree with him. Children before puberty have an entirely different type of carcinoma from those in the middle-aged group and so do some of the very old people, but I do not think that age alters the treatment.

DR. FRAZELL: I will hedge too.

DR. KLOPP: I do not think age makes any difference.

DR. MCCLINTOCK: I am in agreement. I think that age makes no difference. There are some of the more highly malignant thyroid cancers which, if proved on frozen section to be of anaplastic type, should have less surgery than some of the others, but age per se is not a contraindication to an attempt at removing the entire cancer.

MODERATOR: *Does the cell type of cancer influence your procedure?*

DR. CRILE: Yes. For example, a tumor in a young person in her twenties, predominantly follicular with very few papillary areas, which is going to behave like a papillary carcinoma, should be treated as such. On the other hand, an undifferentiated carcinoma, almost always occuring after the age of 40, should not be operated upon at all. In these cases the clinical diagnosis is almost invariably recognized, but it should be confirmed by needle biopsy. This should be followed by roentgen therapy, because I think it is a terrible thing to operate upon these patients except to relieve respiratory compression.

DR. FRAZELL: I think that there is increasing evidence that the follicular cancer causes regional metastases and behaves like papillary cancer. We treat them the same. We are all pretty much in agreement as to the anaplastic tumors. I have never cured a giant-cell cancer of the thyroid, allthough we have had some survivals among patients with tumors which we know as "solid small round cell" and "spindle cell" treated by wide surgical excision.

DR. KLOPP: I think the treatment is not in any way altered by the histologic type of disease, but that it is altered to a considerable extent by the actual anatomic extent of the disease. Many of the anaplastic lesions are larger than the papillary tumors.

DR. MCCLINTOCK: The histologic type means a great deal to me in determining what I do with the patient. For the patient with a follicular carcinoma and skeletal metastases, I am inclined to do just a total thyroidectomy with the hope that radioactive iodine may be useful. If the patient has extensive cervical lymph node metastases and a frozen section suggests papillary carcinoma, then I am inclined to split the sternum, begin the dissection in the anterior mediastinum and do a total thyroidectomy, removing all of the lymphatics that drain the thyroid.

DR. DUFFY: Question from the floor for Dr. Crile: *Do you think there are histologic cancers of the thyroid which do not have the usual clinical potentialities of carcinoma?*

DR. CRILE: If there are 200 people in this room, 1 of them has a cancer of the thyroid. That is the little 1 cm. lesion which one sees in 1 of every 200 goiters removed at autopsy. Certainly 1 in 200 people in this room is not going to die of cancer of the thyroid. It is a disease found very much more commonly in autopsies or routine thyroidectomies than it is clinically; so we must assume that the vast majority of these cancers, like cancers of the prostate, never "grow up."

MODERATOR: *Which is more important prognostically, Broders' classification or the extent of the disease?*

DR. CRILE: We break down thyroid cancers into 2 clinical types, the papillary and the nonpapillary, and a lot of tumors which are predominantly follicular we classify as papillary because we have no better term. These are the lymph-node metastasizing types of cancers which may spread systemically but do not often do so. This is a very homogeneous group, but I think Broders' classification works perfectly in the other thyroid cancers.

DR. FRAZELL: We have always thought that Broders' classification had a very limited application to the prognostic point of view of thyroid cancer. We think the local manifestations of the disease are more important.

DR. KLOPP: As far as I am concerned, Broders' classification has no significance in terms of what I would do in the way of treatment. The extent of the disease, however, has a great deal of significance.

DR. MCCLINTOCK: From the way this discussion has been going, it is obvious that the papillary, and possibly some of the follicular, types of cancer are going to fall into the lower gradings under the Broders' classification, and that the anaplastic types are all going to be in grades 3 or 4. Therefore, I think the extent of the tumor itself is perhaps more important than Broders' classification.

MODERATOR: *When carcinoma is found to be apparently restricted to 1 lobe and involves the homolateral lymph nodes, what is your procedure?*

DR. CRILE: We make absolutely certain that the operation for the primary tumor is complete with a wide area of surrounding tissue; then we thoroughly explore all the places in the neck in which tumor is apt to be present, the mediastinum and the area behind the thyroid particularly and the paratracheal nodes. We remove all nodes and groups of nodes that we can see with their fatty envelope. This is with preservation of the sternothyroid muscle, which I have almost never seen directly involved by papillary carcinoma.

DR. FRAZELL: We do a neck dissection, whether we can palpate nodes or not. We studied a series of 182 consecutive neck dissection specimens a few years ago. In 18 cases the necks were dissected bilaterally. In those patients who had clinically positive cervical nodes we recovered metastatic papillary cancer in about 95 per cent. In the patients who were declared to be clinically negative by one or more observers we recovered metastatic carcinoma in 62 per cent.[10] This was a rather startling finding to us. Next to the region about the recurrent nerve the most frequent sites for metastatic nodes in papillary cancer of the thyroid were the mid- and the upper-jugular chains. In fact, 55 per cent of these nodes which we found in clinically negative necks were either in the upper- or mid-jugular regions or in the spinal accessory areas. Whether our plan is going to influence the ultimate outcome, only time will tell. Probably 60 per cent of the "5-year survivals" in patients with papillary carcinoma are actually 5-year survivals with disease. It will take a much longer period of observation to prove or confirm this fact.

DR. KLOPP: Again, I think we were referring specifically to cancer of the thyroid in a patient with palpably diseased, metastatic nodes in the homolateral side of the neck. Such a patient should be treated by total thyroidectomy and neck dissection.

DR. MCCLINTOCK: To which I would add that the entire lymphatic drainage of the thyroid should be removed, including the lymphatics in the anterior mediastinum.

DR. CRILE: We thoroughly explore these necks when there is a papillary carcinoma, and only once or twice in my life have I closed a neck with a papillary carcinoma in it without the most thorough exploration. This can be done through a wide thyroidectomy incision. The entire jugular chain, right up to the upper neck, can be explored. I do not say that when we take 40 involved nodes out of a neck we get every one, yet those patients are living 18 years. I wish to emphasize that there is a relationship between the size of the primary tumor and the metastases, and that if these tumors are going to metastasize they are very apt to do so before they become a tumor clinically. The cases in which the nodule was less than 1 cm. in diameter, which is not in most cases a clinical nodule, had 100 per cent metastases. The explanation of that is obvious; it was the metastases that brought the patient to the doctor, not the primary tumor. These nodes can be seen in a neck long before the thyroid tumor becomes palpable and can be felt at the time of surgery. In our entire experience we have only seen 27 patients who did not have metastases demonstrable at the time of the first operation. We have operated upon these patients and have followed them over a period of 18 years, the average being over 5 years. Only once has there been a reoperation, and that was on a lesion of the isthmus for which we did not do a thorough dissection or even rotate the lobes. That patient finally developed a little metastasis out in the lateral cervical region which was removed 4 or 5 years ago, and she has never had any further trouble.

DR. FRAZELL: We have never been able to find any correlation between the size of the primary lesion and the presence or absence of cervical lymph-node metastasis.

DR. CRILE: We have at the present time 71 patients upon whom we performed the primary surgical procedure. There is today not a single patient living with recurrence in the neck that anyone can feel. Now, I do not explain this except by the fact that we give these people desiccated thyroid in large doses after operation. In other words, I believe this lesion is an "endometriosis" of the thyroid and just as reversible.

DR. FRAZELL: Out of the 850 patients with thyroid cancer now under observation at our Clinic, about 55 per cent are now considered to have papillary carcinoma. Two hundred and twenty-five of those with papillary tumors are eligible for 5-year follow-up figures, and the over-all survival rate is only about 65 per cent. Now, if we go back to those who have never been touched prior to coming to us we claim only 67 per cent cures. Of 23 patients who died of cancer, 1 had metastasis in the eye before he came to us, 1 in the femur, and 1 in the chest wall. Later on we either took biopsies or did a subtotal removal in anticipation of using radioactive iodine, and 6 of these patients proved to be technically inoperable because of invasion of the musculature of the neck, the trachea or the esophagus, or direct extension into the mediastinum. We operated on an additional 6 because we misinterpreted the clinical examination, and found that the tumors were technically nonremovable. Three other patients died postoperatively because of probably overenthusiastic efforts to try to remove this extensive disease.

DR. CRILE: We have seen such cases, but they always have been operated on previously, and I do not see the inoperable ones. Now here we may be excluding certain types of papillary carcinomas which have undifferentiated areas. I am sure Dr. Winship will agree that undifferentiated areas are found in some of these papillary carcinomas in older people. We classify our cancers in accordance with the highest grade of malignancy present, and there may be undifferentiated areas in the type of cases that you speak of.

DR. FRAZELL: You have said that if patients are under 40 and their tumors contain a little papillary component, they will act like papillary carcinoma. Three patients less than 20 years of age have come to us with tracheostomies because of invasion of the trachea by papillary carcinoma.

DR. KLOPP: We take out the nodule or nodules with a margin of normal thyroid on all sides. If the pathologist can, on frozen section, give us a diagnosis of cancer, we do a total thyroidectomy. If there are palpably involved nodes on one side, the neck dissection can be done at the same time.

MODERATOR: *When carcinoma is apparently restricted to one lobe, and there are involved homolateral nodes, what do you do about the opposite lobe?*

DR. FRAZELL: We do total thyroidectomies occasionally. I do not like the operation, but as I said originally, it is a little difficult to be consistent in all aspects of treatment of thyroid cancer. Total thyroidectomy certainly has some justification from the point of view of multiple foci of disease, but I wonder if it pays off in the long run, since the incidence of bilateral nerve palsy is considerable, and hypoparathyroidism is a troublesome complication.

DR. CRILE: I agree 100 per cent with that.

MODERATOR: *Do you fear hypoparathyroidism?*

DR. FRAZELL: Yes.

DR. CRILE: It is very expensive to treat and not always too satisfactory, in my experience.

DR. KLOPP: That should not in any way alter what needs to be done. It can be handled adequately, although admittedly it is a little expensive. In our hands the incidence of hypoparathyroidism in total thyroidectomy is quite low.

DR. MCCLINTOCK: Tetany is not a pleasant experience, to be sure, and I think that perhaps the attitude of Dr. Crile and Dr. Frazell in not doing total thyroidectomies, and in leaving perhaps a protecting posterior capsule on the uninvolved side, has considerable justification. It certainly is not pleasant to have to follow these patients and regulate their calcium.

MODERATOR: *Do you think it is necessary to split the sternum?*

DR. CRILE: I will admit that there are cancers of the thyroid which go right down to the toes, but these are not the cases one cures anyway, and the type of papillary carcinoma which is curable I think one can cut out through the neck.

DR. FRAZELL: I have had relatively little experience in attempting to dissect the anterior mediastinum. I have always thought that it was not an anatomic site that lent itself to dissection very well. We are all very much interested in Dr. McClintock's work on this, and we shall watch to see how these cases come out.

DR. KLOPP: It has been my impression that if one removes the strap muscles at the same time that he does the thyroidectomy and neck dissection he can pull up the contents of the mediastinum sufficiently to do a very adequate dissection.

DR. MCCLINTOCK: We have now had about 20 cases in which we have split the sternum either for extensive lymph-node involvement or for tremendous primary tumors that extended directly into the mediastinum.[11] Of the 20 patients, 4 are now dead of their disease. The longest survival is 5 years this month. In 75 per cent of the cases we have found positive nodes in the anterior mediastinum that were inaccessible from the cervical approach.

MODERATOR: *Do you think that external irradiation is of value postoperatively?*

DR. CRILE: In the undifferentiated group it is all one has to rely on. I suppose that in any tumor that is out of control and is not amenable to radioactive iodine and which does not respond to the use of desiccated thyroid, it is the only means we have. But external irradiation is certainly not for use as a prophylactic measure in these carcinomas.

DR. FRAZELL: In our experience the only thyroid cancers that will respond to external irradiation at all are the papillary ones, and the response there has been extremely spotty. I think that in the occasional case of papillary tumor which has proved to be technically inoperable irradiation should be seriously considered.

DR. KLOPP: I think irradiation may help when the disease is out of control; otherwise, I think it is of no value.

DR. MCCLINTOCK: In our experience in Albany external irradiation has had very little value in the treatment of thyroid cancer. In fact, I have reached the conclusion that we have done damage and caused the patient more suffering than the disease itself would have caused. I rarely employ it any longer.

DR. DUFFY: Question from the floor for Dr. Crile: *What is the rationale for the treatment of thyroid cancer with desiccated thyroid?*

DR. CRILE: There are little thyroid cancers in 3 per cent of the population. They develop by the same thyroid strain which probably makes nontoxic nodular goiters develop, namely, increased thyrotropic hormone, and probably that is due to a failing thyroid epithelium which is not making quite as much thyroid as it should. That then can be reversed to a certain degree by giving large doses of desiccated thyroid. I am perfectly sure that desiccated thyroid exerts a certain degree of control in many of the low-grade tumors.[12]

DR. DUFFY: Question for Dr. Crile: *If TSH is responsible in your thinking for thyroid cancer why is carcinoma of the thyroid so infrequently associated with thyrotoxicity?*

DR. CRILE: I first tumbled to this theory because I had a patient with a very toxic adenoma, a basal metabolic rate of 70 plus, and "snowballs" in the chest which had been there quite static for 3 or 4 years. We treated the hyperthyroidism with radioactive iodine, thinking that it was going to be the thyroid tumor which was producing the hyperthyroidism, and instead of that it controlled the hyperthyroidism,and within a few months she blossomed out with cancer and died. Her own thyroid was controlling her. Now, this brings up the question as to whether or not it is really an increased thyrotropic hormone that produces Graves' disease. We do not know.

DR. DUFFY: I should like to ask Dr. Crile the dosage of desiccated thyroid he uses and what negative results he has obtained.

DR. CRILE: We have negative results with everything except the papillary group, and I think an occasional follicular, or what we call encapsuled angio-invasive carcinoma. The dosage is a minimum of 3 grains of some strong USP brand, and up to 4 or 5 grains daily, which is tolerated very well.

MODERATOR: *Do metastases arise from involved lymph nodes after the primary carcinoma has been removed?*

DR. CRILE: I do not believe that they do, because our experience has been that if the primary tumor is completely removed, this disease does not seem to spread from lymph node to lymph node. It seems to be able to remain localized almost indefinitely.

DR. FRAZELL: We assume that metastases continue from one lymph-node group to another as the lymphatics become plugged, and that is the basis and rationale for the vigorous surgical attack on the disease.

DR. KLOPP: It certainly must be assumed that they do. There is no reason to believe that this form of cancer behaves in different fashion from any other. We have 1 case of papillary carcinoma in which a tumor from a metastasis has grown into the jugular vein, and it is hard to understand why this would not metastasize.[13]

DR. MCCLINTOCK: I think the evidence that Dr. Klopp has just presented has answered the question very well.

MODERATOR: *Does papillary carcinoma invade the structures of the neck?* This has been fairly well answered by several members of the panel. Is there anything further to add?

DR. CRILE: May I ask Dr. Frazell whether he ever saw a patient with papillary carcinoma die from lateral cervical invasion of the sternomastoid muscle.

DR. FRAZELL: We have seen them die after the internal jugular vein was taken out and found to be thrombosed with papillary tumor. Isn't that just about the same?

DR. CRILE: I think this brings up a philosophical issue. The question is how far one is going to go with the so-called principle of cancer surgery to take care of these ultra-rare cases which happen once in every 200 or 300 patients. I think it is a very grave responsibility to undertake the deforming of a young girl, which this usually amounts to, in order to eliminate disease which has been highly curable by very conservative means. It is something to which I think we all ought to give serious consideration. The burden of proof, in my opinion, lies on the person who deforms her.

DR. FRAZELL: If you were seeing material that was not apparently very highly selective you would not call it such a highly curable disease.

DR. CRILE: Ours is the average and yours is the exceptional. All I am saying is that in the ordinary case a much less conservative procedure is equally curative.

DR. FRAZELL: I do not think the cure rate at Memorial Hospital is much different from what it is at the Mayo Clinic, or in Chicago, or Boston. We are seeing the end-results of the natural course of neglected and untreated thyroid cancer. We are seeing about 50 per cent each of treated and untreated cancers, and among these untreated cancers we are finding those features I described a moment ago. It shows one aspect of the natural course of this disease which is not commonly appreciated. This disease can kill people, and it does do so.

MODERATOR: *What is the indication for doing an aspiration biopsy on a thyroid carcinoma?*

DR. CRILE: Clinical inoperability.

DR. FRAZELL: We have aspirated many thyroid cancers, but we do not do it any more, because the accuracy was somewhat less than 20 per cent. We think that frozen section diagnosis is much more accurate. We are going to take out clinically significant nodules anyway, so why aspirate? I was very much interested in Dr. Crile's recent article in which he described in his one, and I guess only, aspiration biopsy of a case that subsequently came to surgery in which he was so unfortunate as to get a dermal implant. We have never seen it, certainly not in thyroid cancer. I believe it has happened once in a broken-down squamous cancer, metastatic from an oral primary, but our pathology department has never seen a surgical specimen in which they could say unequivocally that we had a dermal implant secondary to aspiration biopsy.

DR. KLOPP: We use aspiration biopsies only in inoperable cases.

DR. MCCLINTOCK: I do not use aspiration biopsy at all.

MODERATOR: *Are statistics based on 5-year follow-ups of any value?*

DR. CRILE: They are of value only if you take them in the light of absence of demonstrable recurrence.

DR. FRAZELL: The longer you follow patients with papillary thyroid cancer the greater number of deaths from papillary thyroid cancer you will find.

DR. KLOPP: Certainly they are of some value, but I think the important thing to remember is that the patient who has survived for 5 years following one of these procedures is by no means cured of his disease.

DR. MCCLINTOCK: I am in agreement. I think the 5-year period is very encouraging, but I should much rather have a 20-year period before I say that the disease is probably arrested.

MODERATOR: *What is the incidence of hyperthyroidism associated with carcinoma of the thyroid?*

DR. CRILE: Extremely rare.

DRS. FRAZELL, KLOPP AND MCCLINTOCK: Agreed.

MODERATOR: *What percentage of metastatic lesions can be treated with radioiodine after thyroidectomy?*

DR. CRILE: I cannot give you a percentage since it seems to me that there is no use even trying to use it unless there is demonstrable colloid in the tumor. One does not need it in the vast majority of the tumors which contain colloid because they are differentiated tumors.

DR. FRAZELL: We have seen a few patients with papillary carcinoma who, after having been made myxedematous, did pick up the isotope in appreciable amounts in the chest. In fact, in 2 patients I think the pick-up was so great that it probably was a contributing cause to their death. They both developed fulminating pneumonitis.

DR. KLOPP: The actual percentage, I think, will vary from place to place. Again, the important thing is that there are fairly good means of determining which tumors are going to be well treated by the administration of iodine by just using suitable tracer studies.

DR. DUFFY: The fact remains that radioiodine constitutes an ancillary treatment which is definitely superior to external irradiation in the well-differentiated cases. We have several cases in which the skull lesions and some lung lesions have disappeared. Obviously, there are no cures, but there is very satisfactory regression in approximately 25 per cent of the treated cases.

Question from the floor: *Do documented reports of cancer of the thyroid region, following diagnostic doses of I^{131}, constitute a contraindication to the routine use of this as a diagnostic tool?*

DR. CRILE: I have not heard of any documented cases.

DR. KLOPP: I do not know that any such case exists. But I think it is worth pointing out that the same would have been said for the effect of X-ray therapy on skin perhaps 5 years after irradiation was instituted. I do not think that means that we know it is safe, but we certainly do not have any documentation that it is harmful.

DR. FRAZELL: I know of no documented case in which thyroid cancer has appeared following either the diagnostic or therapeutic use of I^{131}.

DR. DUFFY: A survey is now being conducted in Washington on patients irradiated 25 years ago for thyrotoxicosis. So far, no cases of carcinoma have been found.

DR. KLOPP: We have a number of patients with thyroid carcinoma who had formerly received irradiation for acne and hirsutism.

DR. WINSHIP: I want to thank the panel on behalf of the Medical Society of the District of Columbia. I am sure everyone enjoyed the discussion.

BIBLIOGRAPHY

1. VAN METER, S. D., SHIVERS, M. O., AND SIMPSON, W. P.: West. J. Surg., 1931, **39**, 947.
2. DUFFY, B. J., JR., AND FITZGERALD, P. J.: J. Clin. Endocrinol., 1950, **10**, 1296.
3. SIMPSON, C. L., HEMPELMANN, L. H., AND FULLER, L. M.: Radiology, 1955, **64**, 840.
4. CLARK, D. E.: J.A.M.A., 1955, **159**, 1007.
5. LATTMAN, I., WINSHIP, T., KLOPP, C. T., AND CAULK, R. M.: Clin. Proc. Child. Hosp., Wash., 1955, **11**, 209.
6. WINSHIP, T.: Pediatrics, 1956, **18**, 459.
7. ZIMMERMAN, L. M., AND WAGNER, D. H., in Tr. Am. Goiter A. for 1953. Springfield, Ill.: Thomas, 1954, p. 287.
8. MORTENSEN, J. D., WOOLNER, L. B., AND BENNETT, W. A.: J. Clin. Endocrinol., 1955, **15**, 1270.
9. LAHEY, F. H., in Tr. Am. Goiter A. for 1953,[7] p. 229.
10. FRAZELL, E. L., AND FOOTE, F. W., JR.: Cancer, 1955, **8**, 1164.
11. MCCLINTOCK, J. C., STRANAHAN, A., ALLEY, R. D., AND BAKER, W. A., in Tr. Am. Goiter A. for 1953,[7] p. 371.
12. CRILE, G., JR.: Cleveland Clin. Quart., 1955, **22**, 161.
13. KLOPP, C. T., ZUSKA, J., AND WINSHIP, T., in Tr. Am. Goiter A. for 1953,[7] p. 360.

THE RHEUMATIC ERYTHEMAS

ROBERT F. DYER, M.D.

Resident in Medicine, District of Columbia General Hospital, Washington

RHEUMATIC FEVER is a repetitive disease in which each new episode may increase the degree of cardiac damage. Hence, it is of the utmost importance that the earliest symptoms be looked for, and recognized by all physicians. Due to the close statistical correlation between the eruption of certain cutaneous erythemas and incipient rheumatic fever it is mandatory for the clinician to consider carefully whether these lesions are specific manifestations of the disease or merely incidental findings. Furthermore, if they are specific to the symptom-complex known as rheumatic fever, the diagnostician must know their characteristics, frequency, and prognostic significance. Rheumatic fever is such a protean condition that the physician cannot afford to overlook any symptom which might lead to an early diagnosis.

Since the United States does not require the reporting of rheumatic fever cases, and many so-called rheumatic fever cases reported in the literature are now deemed to be misdiagnosed cases of arthritis, the older statistics of the incidence of the rheumatic erythemas are not too valuable. The literature contains numerous accounts of erythema multiforme, erythema nodosum, erythema marginatum, erythema annulare rheumaticum, urticaria, purpuras, drug and toxic rashes, hemorrhagic eruptions, subcutaneous nodules, telangiectases, scarlatiniform eruptions, sweat eruptions, and herpes zoster associated with active cases of rheumatic fever. For the cutaneous symptoms to be of value a survey is essential in order to determine which of the above conditions are truly associated with rheumatic fever on a cause and effect basis. Then their frequencies of incidence can be compared.

REVIEW OF THE LITERATURE

In the early nineteenth century Bright[1] and Wells[2] reported the occurrence of erythemas in undoubted cases of rheumatic fever, but they were unaware of the significance of the rashes. Rayer,[3] who considered articular pain as the ultimate criterion of rheumatic affection, in 1835 described the eruptions associated with rheumatic fever. Ferrand[4] in 1862 described the various annular or papular forms, most of which appeared during the febrile period and were especially noted when there were cardiac complications. Perround[5] in 1873 described similar eruptions as "erysipelas rheumatismal." At the International Medical Congress of 1881 in London, Barlow and Warner[6] delivered their paper on subcutaneous nodules in rheumatism and chorea and reported that 10 of the 27 cases with nodules also had a rash and that 8 of the 10 rashes were erythema marginatum or papulatum. Barlow[7] later stressed the occasional occurrence of erythema marginatum at the onset of, or during the course of acute rheumatism. In Cheadle's classical monograph[8] on the rheumatic state in childhood (1889) the author listed erythema marginatum as one of the specific manifestations of the rheumatic stage.

Poynton and Paine[9] in 1913 described the cutaneous manifestations of rheumatism which resembled tinea circinata, or erythema iris, and stated that this rash might appear either before the full "picture" of the disease had developed, or during an attack, or as an almost solitary incident between attacks. Davidson[10] in 1919 suggested that the marginated erythema of serum sickness might be due to the albumin fraction while the urticarial and morbilliform eruptions were due to euglobulin and pseudoglobulin, respectively. Lehndorff and Leiner[11] in 1922 described the typical circinate or gyrate macular eruption of erythema marginatum under the name "erythema annulare rheumaticum." They stated that it was completely specific for rheumatic fever, and, furthermore, that it was caused solely by the etiologic agent of rheumatic fever. Goodall and Washbourne[12] described an erythema marginatum or circinatum in 1928 which occurred in serum sickness. Lewis and Zotterman[13] stated that the underlying basis might be the liberation of histamine or a histamine-like product.

Debré[14] stated in 1936 that erythema annulare rheumaticum must be distinguished from aberrant erythema marginatum seen in serum sickness and also from the rash of erythema infectiosum. Debré also stated that the rash develops only in those severe cases of acute rheumatism with a *Streptococcus viridans* bacteremia and precedes the articular symptoms. Perry[15] in 1937 stated that he had never seen erythema marginatum in children without other evidence of specific rheumatic manifestations. Abramson and Tunick[16] reported in 1938 that the severity of the eruption may be of comparable intensity to that of the rheumatic infection.

A very critical study of the rheumatic erythemas was made by Keil,[17] and in 1937 he reported his results and gave a basis for the classification of the erythemas of rheumatic fever. First, he set up 3 postulates to be fulfilled before an erythema could be considered to be of rheumatic origin: (1) the patient must have true rheumatic fever; (2) the rheumatic fever must be active; (3) the erythema must be related to the rheumatic affection in such a manner as to exclude coincidence. On the basis of these postulates Keil found that 53 cases from a 5-year series at Mt. Sinai Hospital satisfied the requirements. All of these patients were in the active rheumatic process. In addition to the proven rheumatic erythemas he also found patients in this series with other coincidental cutaneous lesions.

Keil then classified the rheumatic erythemas into several types: (1) the simple papular form (erythema papulatum rheumaticum), and (2) the ringed forms, erythema marginatum rheumaticum (with elevated border) and erythema annulare rheumaticum (flat). There were 14 cases of erythema papulatum rheumaticum in his series of 53. Their clinical characteristics were: dull red papules (matchhead-size to pea-size) situated mainly about the articulations, especially the elbows, knees, arms, and buttocks. The anterior surfaces were favored. The rashes were transient, from a few hours to several days in duration, and nonpruritic. The lesions generally appeared during exacerbations of the rheumatic fever. There were 15 cases of erythema marginatum rheumaticum, and they possessed the most characteristic morphology of all the rheumatic erythemas. Clinically they appeared in the form of numerous circles or arcs of variable size, occasionally with diameters of several inches. Dull red borders were raised above the level of surrounding skin. Contrasting centers were flat and brown. By peripheral extension and coalescence of contiguous rings, polycyclic and geographical figures were produced resulting in a bizarre effect. In typical instances the lesions were restricted to the trunk and extremities. They were characterized by sudden onset, rapid spread, and a transient duration. They often appeared and disappeared overnight. There were no sequelae nor subjective symptoms. The erythema marginatum appeared during some phase of the active disease, but there was no constant relation between the occurrence of the erythema and the severity of the course of the rheumatic fever. Keil thought that this erythema is found chiefly in the classical examples of rheumatic fever with definite cardiac lesions. It is the type of erythema most likely to be accompanied by subcutaneous nodules and other frank rheumatic signs. Therefore, in childhood the appearance of erythema marginatum may be regarded as evidence of rheumatic fever.

There were 24 cases of flat erythema annulare rheumaticum in the series, and each was invariably associated with endocarditis, either concurrently or subsequently. Clinically the erythema was a flat, circular lesion, several millimeters in diameter. The color was a subdued red to a delicate vivid hue. There was a predilection for the trunk, upper arms, and legs. The lesions recurred in successive outbreaks, each crop with a short duration of a few hours to several days. The eruptions were visible but not palpable.

TABLE 1

Incidence of the Rheumatic Erythemas in Rheumatic Fever Patients

Date	Investigator	Total No. of Cases in Series	Cases of Erythema	Percentage
1881	Barlow and Warner[6]	27 (rheumatic fever with nodules)	8	30
1912	Cockayne[21]	(acute rheumatic fever)		4
1922	Lehndorff[11]	(rheumatic fever endocarditis)		66
1930	Leichentritt[22]	10 (rheumatic fever)		62.5
1931	Coburn[23]	162 (rheumatic fever)	28	17
1934	Chester and Schwartz[24]	21 (acute rheumatism)	10	50
1935	Walgren[25]	146 (acute rheumatism)	18 (annular)	12
1937	Maddox[26]	428 (acute rheumatism)	60	14
1937	Keil[17]	523 (rheumatic fever)	53	10

Griffith and Campbell[18] reported in 1948 that the most common lesion in their series, at a U. S. Naval institution and a rheumatic fever convalescent hospital, was the erythema annulare rheumaticum type. They thought that it is characteristic enough to make the diagnosis of rheumatic fever by its presence alone. They reported that the lesions first appear after the patient stands for a few minutes with bare skin. They believed that true urticarial lesions are often misdiagnosed as erythema multiforme and erythema nodosum and are really only incidental to rheumatic fever. They stated that subcutaneous nodules are not specific grossly, since they also appear in syphilis, yaws, and rheumatoid arthritis. Of a series of 36 patients with erythema marginatum, 44 per cent had definite cardiac damage. In 50 per cent of the cases the eruption appeared later than articular symptoms. They concluded that erythema marginatum should be given importance over any other single manifestation of rheumatic fever.

On the other hand, on the basis of his standard 10-year study of 1,000 cases of rheumatic fever, Jones[19] listed erythema marginatum only as 1 of the 6 minor criteria of rheumatic fever. Laurent and Chevallier[20] rank the same lesion as a major criterion. Table 1 gives the reported incidence of rheumatic erythemas in patients with rheumatic fever.

ETIOLOGY

It is now well established that practically all initial and recurrent attacks of rheumatic fever are precipitated by antecedent hemolytic streptococcal respiratory infections. Hence, the etiology of the rheumatic erythemas is also probably linked with the streptococci. Research along this line of thought has been done by Coburn.[23] He injected streptococcal nucleoprotein intracutaneously and was able to produce erythema marginatum at the site of injection as well as other areas of the body. Winkler[27] reported the case of a patient with typical erythema annulare for whom a streptococcal autovaccine was prepared and injected subcutaneously. Five hours later the subsided erythema reappeared in the patient. The Prausnitz-Küstner reaction was positive when the serum of the patient and streptococcus vaccine were used. Other investigators think that the rash can be due either to the invading microörganism, or to an anaphylactic reaction.[28] Lewis and Zotterman[13] demonstrated a refractory state subsequent to the injection of histamine. Therefore, it is possible that the underlying basis may be the liberation of a histamine-like substance. Regarding the etiology, Walgren[25] suggested that the erythema may be an angioneurosis, rising on a rheumatic allergic basis in certain highly susceptible individuals.

CLINICAL FEATURES

Currently the clinical features of erythema marginatum are as follows: It is a clinical form of erythema multiforme and presents primary lesions which are, on gross examination, flat-topped, disk-shaped papules. They gradually enlarge at the periphery and regress at the center, forming large circinate patches. The central portions may remain for some weeks as a faint chamois color from the blood pigment.[29] In all types the color disappears entirely on pressure. Scarring is infrequent, and if present probably represents a secondary infection. The erythema is nonpruritic. In common medical usage erythema marginatum is used interchangeably with erythema annulare, although the former by definition has a palpable elevated border.

PATHOLOGIC FEATURES

The microscopic appearance of erythema marginatum is characterized by vascular dilatation, moderate perivascular round-cell infiltration of the corium, and edema of the epidermis. Carol and van Krieken,[30] reporting on the histopathologic features of erythema annulare, stated that the cellular infiltration was predominantly polymorphonuclear leukocytes distributed about dilated vessels in papillary and subpapillary zones. Keil[17] found some tendency toward palisading also.

CASE ILLUSTRATING EARLY DIAGNOSTIC DIFFICULTIES

C.C. (D.C. General Hospital, Case No. E-18,135) was admitted on December 11, 1953. He was an 11-year-old, white, third-grade student, whose chief complaint was precordial pain and a rapidly spreading body rash of 5 days' duration. The rash commenced on the trunk and spread cephalad to the neck and peripherally to the back and legs. The rash was red, coalescent, nontender, and nonpruritic. Three days after onset of the rash the patient first noted a pressure pain in the left chest; it was intermittent, disappearing without medication and then recurring. He also complained of a painful left ankle of 2 days' duration, which was painful enough to cause a limp when he walked. Tonsillectomy had been performed in January, 1952 with uneventful recovery. The boy noted a nasopharyngitis 2 weeks prior to entry, which apparently had become asymptomatic after 4 days in bed. He had developed a forgetfulness in order to conceal an insecure family background. Both parents were alcoholics of unknown addresses. The patient was classed as being of dull-normal intelligence.

Physical examination revealed a fairly well-developed, poorly-nourished white boy sitting upright in bed and looking acutely ill and apprehensive. He was lethargic to questioning but coöperative. The temperature was 99.8°F, the heart rate 110, the respiratory rate 20, and the blood pressure 90/60. The skin was pale, dry and warm with large, fawn-colored, coalescent erythematous patches, macular in type, with slightly raised and palpable borders. The lesions were especially prominent over the abdomen, back and axillae. The rash was nontender and was particularly coalescent in the girdle region, axillae and neck creases. It was also present on the upper thigh, forearms and groin. There was no response noted in the rash 24 hours subsequent to an epinephrine (1:1,000) injection, and there was no positive KOH preparation for fungi. The hair was thin and pale blonde. The right eardrum was pale and scarred. The nasal turbinates were enlarged, swollen and hyperemic. A catarrhal discharge was noted in the nose. The lips were dry and red. The tonsils were absent. The tongue was beefy-red, cracked and dry. The sternum was protuberant. There was pain in the left side of the chest on deep inspiration and coughing. No rales nor rubs were heard over the lungs. There was a tachycardia of 110, but there were no murmurs. There was no abdominal mass nor palpable organ. The left ankle was tender to palpation, but without heat or redness.

Urinalysis showed numerous white blood cells and a few red blood cells. The hemoglobin was 12 Gm., the red blood cells numbered 4,000,000, and the white blood cells 11,800, with 75 per cent polymorphonuclears, 2 per cent band forms, 10 per cent lymphocytes, and 9 per cent eosinophils. The sedimentation rate was 35 mm. The electrocardiogram showed sinus tachycardia and right axis deviation. X-ray films of the ankles, chest, and spine were within normal limits.

Therapy consisted of complete bed rest, a low salt diet, and aspirin, 900 mg. daily.

The erythematous rash radiated along the midsection of the patient's body, from waist to back, then up into the neck and down to the knees, forearms, and groin. The patient was moved to another wing of the hospital after several days and, in the course of the moving, walked a short distance inadvertently. Within an hour there were twice as many skin lesions present. All lesions remained nonpruritic and gradually faded away during the second week of hospitalization. By the end of the first 2½ weeks in the hospital the erythema had completely disappeared. In the meantime the chest pain became more intense, tachycardia persisted, and heart murmurs appeared during the second week. Systolic and diastolic murmurs were auscultated in the pulmonary valve areas, and a systolic murmur was heard at the apex. A diastolic murmur appeared in the aortic area. The patient noted increased stiffness of the joints of his legs, but there was some decrease in pain as soon as salicylate therapy was started. Finally pedal edema occurred, in addition to the swelling in the elbow joints. A subcutaneous nodule appeared on the left elbow after the second week of hospitalization. The patient went into congestive heart failure during the third week, was digitalized, and led a stormy course for many weeks until he was deemed well enough to be discharged. He has been hospitalized on 2 subsequent occasions with acute rheumatic fever, and the prognosis is guarded because of the severe degree of valvular heart damage.

Discussion

From this survey of the literature on the rheumatic erythemas it is evident that much confusion has existed concerning their nomenclature, characteristics, and diagnostic significance in rheumatic fever. By adhering to Keil's classification future case reports in the literature will give the physician a better conception of the true frequency of this outward manifestation of rheumatic fever.

Since rheumatic fever flourishes in all climates in the United States, the nature of the illness and its sequelae make early diagnosis all-important in the fight against the active process before permanent cardiac damage occurs. Rheumatic fever is now on the increase. Consequently it behooves the physician to make full use of one of the most valuable clinical aids in the diagnosis of this acute systemic disease of childhood, i.e., recognition of the morphologic expression of associated cutaneous lesions, the rheumatic erythemas. It is quite possible that, if the guardians of the patient presented had recognized the importance of the rash and it had been diagnosed correctly as erythema marginatum earlier, the cardiac and articular lesions might have been prevented by early therapy. Therefore, this case dramatically illustrates the value of more specific knowledge among laymen, as well as physicians, and a higher index of suspicion during all routine pediatric examinations for the rheumatic erythemas.

Summary

Cutaneous manifestations of rheumatic fever consist of various exudative dermatoses, the most specific of which are forms of erythema multiforme—the rheumatic erythemas, erythema papulatum rheumaticum, erythema annulare rheumaticum and erythema marginatum rheumaticum.

Erythema rheumaticum is a classical early diagnostic manifestation of rheumatic fever sometimes appearing before articular and cardiac symptoms, and it may continue long after all other clinical evidence of rheumatic fever has disappeared.

Erythema rheumaticum indicates a good prognosis for rheumatic fever unless it recurs or appears on the face.

Erythema rheumaticum is due either to the presence of the invading microörganism causing rheumatic fever or a histamine-like compound, or it is an anaphylactic reaction.

Erythema rheumaticum usually starts as flat papules and clears in the center as it expands in size. Finally, the migratory borders of several lesions coalesce into an extensive marginate or flat, annular erythema. These erythemas are transient and may persist for only a few hours or as long as a few weeks. They may recur for weeks or months. They commonly cause no subjective symptoms and are nonpruritic. Consequently

they may be easily overlooked in a hasty examination if the examiner does not have a high index of suspicion.

The rheumatic erythemas characteristically attack the trunk, extremities, back, and buccal mucous membranes.

The rheumatic erythemas are associated with about 10 per cent of all known cases of rheumatic fever.

Whether the physician regards transient erythema marginatum as one of the major or minor criteria of rheumatic fever, it is of major importance to initiate adequate rheumatic fever therapy once the diagnosis has been made.

BIBLIOGRAPHY

1. Bright, R.: Reports of Medical Cases, vol. 2. London: Longman, Rees, Orme, Brown, and Green, 1831, p. 468; Tr. Med.-Chir. Soc. Lond., 1839, **22**, 1.
2. Wells, W. C., cited by Keil, H.: Bull. Inst. Hist. Med., 1936, **4**, 789.
3. Rayer, P. F. O.: Diseases of the Skin, vol. 2. London: C. A. Armand, 1835, p. 115.
4. Ferrand, E. A. A.: Les exanthemes des rheumatisme. Paris Thesis, 1862, **40**, no. 199.
5. Perround: Ann. dermat. et syph., 1863, **5**, 161.
6. Barlow, T., and Warner, F.: Tr. Internat. Cong., 7 sess., Lond., 1881, **4**, 116.
7. Barlow, T.: Brit. M. J., 1883, **2**, 509.
8. Cheadle, W. B.: The Various Manifestations of the Rheumatic State in Childhood. London: Smith, Elder & Co., 1889.
9. Poynton, F. J., and Paine, A.: Research on Rheumatism. London: J. & A. Churchill, 1913, p. 420.
10. Davidson, W. T. G.: Glasgow M. J., 1919, **91**, 321; **92**, 20.
11. Lehndorff, H., and Leiner, C.: Ztschr. f. Kinderh., 1922, **32**, 46.
12. Goodall, E. W., and Washbourne, J. W.: Infectious Diseases, vol. 3. London: Lewis, 1928.
13. Lewis, T., and Zotterman, Y.: Heart, 1926, **13**, 193.
14. Debré, R.: Presse méd., Paris, 1936, **44**, 1613.
15. Perry, C. B.: Arch. Dis. Childhood, 1937, **12**, 233.
16. Abramson, H., and Tunick, A. M.: J. Pediat., 1938, **13**, 94.
17. Keil, H.: Ann. Int. Med., 1938, **11**, 2223.
18. Griffith, G. C., and Campbell, A. D.: Am. Pract., 1948, **2**, 622.
19. Jones, T. D.: J.A.M.A., 1944, **126**, 481.
20. Laurent, F., and Chevallier, J.: Sem. hôp. Paris, 1955, **31**, 485.
21. Cockayne, E. A.: Arch. Middlesex Hosp., Lond., 1912–13, **28**, clin. s., **11**, 28.
22. Leichentritt, B.: Ergebn. d. inn. Med. u. Kinderh., 1930, **37**, 1.
23. Coburn, A. F.: The Factor of Infection in the Rheumatic State. Baltimore: Williams & Wilkins, 1931.
24. Chester, W., and Schwartz, S. P.: A.M.A. J. Dis. Child., 1934, **48**, 69.
25. Wallgren, A.: Acta paediat., Stockholm, 1935, **17**, 447.
26. Maddox, K.: M. J. Australia, 1937, **1**, 499.
27. Winkler, W.: Ann. paediat., 1947, **168**, 303.
28. Birkhaug, K. E.: J. Infect. Dis., 1929, **44**, 363.
29. Sutton, R. L., and Sutton, R. L., Jr.: Diseases of the Skin, 10th ed. St. Louis: Mosby, 1939, p. 144.
30. Carol, W. L. L., and van Krieken, J. A.: Acta paediat., 1935, **17**, 372.

PLIMASIN IN THE TREATMENT OF HAY FEVER

MARVIN FUCHS, M.D.

Associate in Medicine, George Washington University School of Medicine

HALLA BROWN, M.D.

Chief of Allergy Clinic, George Washington University Hospital

SINCE THE INTRODUCTION of antihistamines to clinical medicine more than ten years ago, these agents have gradually achieved deserved recognition in the treatment of allergic disorders. Their general usefulness, especially in hay fever, urticaria and serum sickness, as well as in selected cases of bronchial asthma, dermatitis and pruritus, has led to the further exploration for better agents. Accordingly, the various pharmaceutical houses have continued their campaign for new drugs and a reapplication of old drugs, alone or in combination, to offset previous limitations. It is generally agreed that the major considerations of antihistamine therapy today consist of maximum effectiveness with a minimum of side-reactions. Of only secondary importance these days is duration of effect, since it is possible to modify medication to give delayed time disintegration curves by selective coating, granules and the like.

Despite isolated claims to the contrary, none of the new antihistamines introduced have significantly exceeded in effectiveness some of the original substances used, notably Pyribenzamine and Benadryl. Unfortunately, these latter substances are high on the list of producers of undesirable side-effects, so much so that these side-reactions, especially sedation, may be used to advantage in cases in which nervousness or insomnia complicate or are independent of the original allergic disorder. Accordingly, we turned our attention to an evaluation of a new antihistamine, Plimasin, which combines the effect of 25 mg. Pyribenzamine (tripelennamine hydrochloride) and 5 mg. of Ritalin (methylphenidylacetate hydrochloride).

Previous studies had indicated that this combination appeared to retain the effectiveness of Pyribenzamine while reducing the drowsiness often produced. These studies dealt with relatively large numbers of patients with varying disorders, varying from dermatoses[1] to rhinitis, urticaria and eczema.[2, 3] Most recently a report from 12 medical clinics[4] was published with the evaluation of the American Academy of Allergy of 294 patients treated with Plimasin. Of these 255 were patients with seasonal allergic rhinitis. Attempts at control studies were made, comparing the response of Plimasin against Ritalin, 5 mg. and Pyribenzamine, 25 mg. Since several questions were unanswered by these reports, we decided to determine the effectiveness of Plimasin under the most stringent terms possible. The following standards were adopted:

1. A homogeneous group of patients, small in number, was studied, in the Allergy Clinic of George Washington University Hospital.

2. A single pollen season (April–September, 1955).

3. All patients suffered from a single disorder, seasonal rhinitis.

4. All patients were completely worked up, and were somewhere in the course of specific immunization therapy. The work-up consisted of a complete history and physical examination conducted by the Medical Department. All appropriate laboratory tests were ordered pertinent to the over-all medical situation prior to referral to the Allergy Clinic. Here a detailed allergy history was taken, and a recheck of physical findings relating to the organs affected. Chest and sinus X-rays, sputum analysis, blood count

and special laboratory procedures were performed where indicated. A survey of skin test with major allergens was then performed. Where reactions confirmed clinical impressions, a titration study was carried out by serially diluted concentrations of the offending substance to determine the degree of sensitivity.

5. The double blind procedure was used; i.e., the composition of the medication was unknown to both the patient and doctor. It was known by the physician that of the 3 ingredients (labeled Plimasin A, B and C) one was the new agent, another Pyribenzamine, and the third a placebo. The agents were prescribed through the Hospital pharmacy in full dosage, 2 to 4 a day, rather than dispensed, so that the patient would not suspect that he was being studied in regard to a new drug. A nominal charge of 25 cents was made for the same reason.

6. The various members of the Clinic staff were given a typewritten page of questions to be asked of the patient, as follows:

How did the medicine work?
Did it bother you in any way? If so, how?
How does it compare with any other medicine that you have taken?

7. The response of the patient was recorded on the chart. The principal investigators independently analyzed the results according to effectiveness. (Excellent or good was recorded as effective; fair or poor was considered ineffective.)

Results

Plimasin A (Plimasin)		Plimasin B (Placebo)		Plimasin C (Pyribenzamine, 25 mg.)	
Patients	17	Patients	10	Patients	14
Effective	15	Effective	4	Effective	13
Ineffective	2	Ineffective	6	Ineffective	1
Side-effects	3	Side-effects	0	Side-effects	5
Nausea	1			Nausea	1
Drowsiness	1			Drowsiness	4
Shakiness	1				

SUMMARY AND CONCLUSIONS

The results indicate that the addition of Ritalin to Pyribenzamine maintains its effectiveness in the 80 and above percentage previously reported for other antihistaminics in the treatment of seasonal rhinitis. Of interest likewise is the fact that 1 half-dose (25 mg. of Pyribenzamine) seems to be as effective as the recommended 50 mg. size. The placebo level of 40 per cent effectiveness is in keeping with similar studies. Both investigators had identical scores in their analyses.

Reduction in dose of Pyribenzamine from 50 to 25 allows effective maintenance as the 33 per cent figure indicates. The additional Ritalin, however, reduced the percentage of drowsiness to less than 10 per cent but had little or no effect on nausea. Of possible significance is the 1 patient who complained of shakiness in the Plimasin series, possibly attributed to central nervous stimulation by Ritalin.

It is realized that the number of patients included in the series is too small to attempt to draw statistical conclusions. However, the study definitely demonstrates a method of analysis of a problem in reducing side-effects of a helpful therapeutic tool when only small numbers of subjects are available.

BIBLIOGRAPHY

1. Kuhn, B. H.: Plimasin; preliminary evaluation. A.M.A. Arch. Dermat., 1955, **72,** 59.
2. Arbesman, C. E., in Report of Committee on New Drugs of Research Council of American Academy of Allergy, 1954–55. J. Allergy, 1955, **26,** 377.
3. Steinberg, H. (Santa Monica, Calif.): Obviating the antihistaminic sedative factor with a new anti-allergic—Plimasin, unpublished.
4. Report of Committee on New Drugs of Research Council of American Academy of Allergy, 1955–56. J. Allergy, 1956, **27,** no. 3.

MEPROBAMATE IN ANXIETY REACTIONS INVOLVING DEPRESSION

ABRAHAM RUCHWARGER, M.D.
Medical Officer, Saint Elizabeths Hospital, Washington

BECAUSE THE TREATMENT of depression has not been wholly satisfactory, and because good results have been reported in certain cases following the use of meprobamate,*[1, 2] I considered the possibility that reported results might be improved with higher dosage, and my experience has proved favorable.

I have used the drug in private psychiatric practice with 70 patients, mostly from the middle and lower-middle income groups, who were generally unable to afford long-term psychiatric therapy. Included were 10 with severe neurotic depressions. Of these, 3 were reactive depressions with anxiety components, and 7 were primarily anxiety reactions but with pronounced depressive tendencies of suicidal intensity. The depressions were mostly acute and usually accompanied by insomnia.

These patients received 10 400-mg. Meprobamate tablets a day, 2 just before or immediately upon rising, 2 after each meal, and 2 before retiring. The early morning dose was found to be important since it followed a refreshing night's sleep and inhibited the initial formation of the day's depression.

All patients received psychotherapy. One of the great benefits of meprobamate was that it enabled patients who before taking the drug had been too depressed to talk, to do so. Often their relief and gratitude were so great that they were eager to coöperate further in treatment.

Of the 10 patients with depressions treated with meprobamate 7 showed good results and 3 fair. The patients with chronic cases were more resistant than those with short histories. Nearly all patients were able to sleep well with the drug.

The following case histories are illustrative of the patients who were benefited by meprobamate.

ILLUSTRATIVE CASES

Case 1. A 29-year-old married woman with 2 children was compelled because of her husband's occupation to move frequently. Her friendships were constantly disrupted, and she felt rootless and was unable to adjust to her feeling of isolation. She was suicidal and when first seen was in a complete catatonic stupor. She had been given chlorpromazine without help by a doctor in another city. On a regimen of 10 400-mg. meprobamate tablets a day she emerged from her depression, was able to sleep well, and became accessible to psychotherapy. Under continued meprobamate therapy the improvement in her mood also lasted and she made an adequate adaptation to her difficult life situation.

Case 2. A man aged 69, living alone, had been retired against his will and had been completely unable to cope with his changed status. His life seemed meaningless, and he felt worthless. Panic had overtaken him, and he was on the verge of a breakdown. He could not take a bus or go out on the street alone. He did not associate with anyone. He was agitated, talked aloud to himself, and banged his head against the wall. I was called in by his landlord when he attempted to commit suicide. On meprobamate he improved greatly. His agitation and his panic subsided. He joined a club, is able to travel about the city alone, and is taking a trip to Florida by himself.

Case 3. An old man aged 72, who had come from a foreign country to live with his 2 children, found himself unable to adjust to the new environment. He felt lonely and depressed and was unable to sleep, even with sedatives. When brought to me he was suicidal. On the standard meprobamate dose of 2 tablets 5 times a day he quieted and began to sleep regularly. He developed a more philosophic attitude. He went to school and studied English. He even got himself a part-time job. This patient would normally have been considered a case for shock treatment, but his improvement on meprobamate has been sustained without relapse.

---

* Supplied under the trade name of Miltown by Wallace Laboratories, Division of Carter Products, Inc., New Brunswick, New Jersey.

Case 4. A woman aged 50 developed a severe psychoneurosis with anxiety, depression and somatic symptoms. She was referred to me in the psychiatric department of the hospital where she was being treated for colitis and diarrhea. She had received shock treatment some years previously and had undergone psychoanalysis without help. On release from the hospital she became restless and agitated and was unable to sleep. She locked herself in her room and cried constantly. She lost her job and was without work for 6 months. When she returned for treatment I placed her on the usual dose of meprobamate. From the beginning her anxiety and tension subsided greatly, and she was coöperative in psychotherapy. After 3 weeks her mood had improved sufficiently to permit interest in trying to obtain a job again. Although previously she had been unable to concentrate even on reading the newspaper, she now took a secretarial course and got good marks. She felt that she had to fortify herself with meprobamate just before her job interview, but she reported that she felt completely relaxed when it happened, and she succeeded in getting the job.

Case 5. A man aged 47, married, with a grown daughter, was a severe psychoneurotic of long standing with acute anxiety and suicidal tendencies. For 18 months he had been in a mental hospital where his brother also was a patient. He had had at least 60 shock treatments. Upon release he had been unable to secure a job for 3 years. Shortly before he came to see me he had found one that gave him satisfaction and paid him relatively well. At the same time his daughter married, which also made him happy. Then to his bewilderment and panic, just as everything appeared to be going fine, he started to break down again. He went into a suicidal depression, could not sleep, cried, and was terrified that he would lose his job. He was placed on the standard meprobamate regimen and after just a few days improved so much that his wife telephoned to say that she felt she had to express her gratitude as well as that of her husband. When he returned to see me he was much more relaxed and was able to talk freely. He has maintained his improvement.

Case 6. A woman aged 27, married, with 1 child, had had an acute schizophrenic episode of about 2 weeks' duration with hallucinations, ideas of reference, and feelings of persecution. She neglected everything and roamed about the house at night. Although it seemed impossible to help her without hospital treatment, the husband asked, because he had no one to take care of the child, to see if one of the new drugs would not make it possible to keep his wife at home. After 2 meprobamate tablets this patient slept for the first time in 2 weeks. She also got breakfast for the first time, made the beds, and cleaned the house. Her husband stated that her delusions seemed to be gone. After she had been on 10 tablets a day for 2 days I saw her again. She was a little sleepy but was mentally clear and lucid. No delusions were present. She asked, "What was wrong with me?" After 3 more days the drowsiness passed, and in 10 days she was fine. Her agitation and floor-pacing were gone. She said she felt "slowed down." In a few more days she felt so like her old self that she cut down the dosage of meprobamate on her own initiative. This, however, brought a return of her delusions, and the full dose had to be resumed. After 3 sessions of psychotherapy it did not seem necessary to continue treatment other than meprobamate. This patient would certainly have had to be kept in a mental hospital without meprobamate treatment.

COMMENT

In the treatment of depression meprobamate appears to be of greatest benefit in cases associated with tension and anxiety. At the higher dose levels used, even serious depressions proved responsive to treatment.

In addition, meprobamate has the great advantage of being virtually free of side-effects. This fact has been noted by all previous investigators of the drug.[1-5] Toxic side-effects were not observed from extended use of meprobamate at doses of 4 Gm. per day. Those patients who required the higher doses of the drug for therapeutic effect were also able to tolerate them without undue sleepiness. Some patients did become somewhat drowsy for several days, but this condition was never incapacitating and soon subsided.

I am also able to confirm Lemere's observation[5] that, unlike reserpine, meprobamate does not aggravate depression where it already exists or precipitate it in patients being treated for other conditions.

In severely depressed patients it is important to sustain the dose of 2 400-mg. tablets 5 times a day for an adequate period and not to attempt to reduce it as soon as good results are obtained.

(*Continued on page 586*)

President's Page

DEPENDENTS MEDICAL CARE ACT

The Dependents Medical Care Act, which goes into effect on December 7, 1956, must be given very serious consideration by all members of the Society, due to its current and future impact upon medical practice.

The basic decision as to whether a private physician will take care of military dependents under the provisions of the Act must be determined by either state, county or local medical societies.

Recommendations are to be submitted to the Department of Defense from the state level as to who shall be the fiscal agent for disbursement of fees. This may be Blue Cross, Blue Shield, private insurance agencies, or some other responsible agent.

Lastly, the fee schedule will be recommended by the members of the Society involved and NOT by the fiscal agent. These fees must be acceptable to the Department of Defense.

In view of the aims of the Department of Defense and, in general, the expressed desire of the medical profession relative to the Doctor Draft Law, it becomes incumbent upon our Society to set up a plan for the care of military dependents.

As a fiscal agent, it must be evident that Medical Service of the District of Columbia is the only logical choice. This organization has a staff, the physical plant, and a vast accumulated experience in the disbursement of claims in this field. While we recognize that there is a certain amount of dissatisfaction among Participating Physicians as regards Medical Service's fee schedule, there can be very little complaint as to the efficiency of this organization in the payment of claims. It is only in this latter respect that the Medical Society is concerned in choosing a fiscal agent for the Dependents Medical Care Program.

The Act states that the fee schedule must be fair and reasonable and conform to medical fees in the area. This must be determined by the membership. A survey of fees under the nomenclature that has been prepared by the Department of Defense will be necessary. An average of these submitted fees will probably be the final answer. We must realize that an average of fees for medical services, established at this time, may have great implications for the future. Average fees, less the costs of collection, may well prove to be a pattern in this and future medical care programs.

Average fees may set a precedent in private medical care and reverse the current philosophy of charges for professional services. This possibility is visualized in the August issue of *Medical Economics* under an article headed "Forecast for 1966." This article purports to be the consensus of 400 medical leaders. With reference to "Forecast for Fees," the following direct quotation from this article seems pertinent:

> "By 1966 you can expect the sliding-scale concept to be largely superseded by the idea of community-wide fee schedules. And fee-splitting promises to become a dying, if not a dead, issue.
>
> "Several trends are apt to combine to make these predictions come true. In the first place, there should be fewer rich people and fewer indigents by 1966. In the resultant leveled-off society, doctors' fees are likely to be leveled off too.
>
> "In the second place, the public seems increasingly opposed to variable fees. As one medical leader puts it: 'The people are insisting on health insurance that pays a predictable part of major medical bills. The sliding scale makes such prediction impossible. So the sliding scale will have to go.'
>
> "As if that weren't enough, there's the competition of closed-panel medicine. Doctors will realize, says the current president of the AAGP, that fixed fees 'are the logical and practical way' to meet the competition of the union health center and the prepayment panel plan.
>
> "As for the fee-splitter—well, when fixed fee schedules come in, he's almost bound to start

(*Continued on page 586*)

Editorials

A PERSONAL INVITATION

I wish to extend to each and every one of you a personal invitation to attend the Golden Anniversary Meeting of the Southern Medical Association, to be held in Washington, D.C., November 12–15, 1956. This promises to be the best meeting that the Southern has ever held, which is a mighty big statement.

We are deeply grateful to the members of the Medical Society of the District of Columbia for their graciousness in canceling their regular 1956 annual meeting in order to coöperate with the Southern on this momentous occasion.

Monday, November 12, will be identified as "D.C. Day," and all papers on the program will be supplied by members of the District Medical Society. Having had the opportunity to sit in on a number of committee meetings to build this program, I know it will be an excellent one. A wide variety of subjects is included so that, no matter what your specialty, you will find something worthwhile. The District doctors are to be congratulated for this fine scientific program.

The Tuesday, Wednesday and Thursday programs will be supplied by the 20 regular Sections of the Southern. A very special effort has been put forth this year to make this 50th Anniversary Meeting unforgettable. I have seen advance copies of the program, and I am sure you will be highly pleased with its excellence.

Last year in Houston we sponsored a Symposium on Geriatrics. This was so highly successful that we are having another one this year with Dr. Milford O. Rouse, of Dallas, Texas, as moderator. If you are interested in geriatrics, you cannot afford to miss this symposium.

We have talked so far only of the scientific side of the Southern. What really makes the Southern the greatest medical meeting in the country is the social activities. Attend your Section, fraternity or alumni luncheon or dinner, where you can renew old friendships and create new ones. These little get-togethers are responsible for the feeling that you must go to the next meeting, if only to meet the friends you made at the last meeting.

Again let me express the deep gratitude of all the officials of the Southern Medical Association to all the officials of the Medical Society of the District of Columbia for their graciousness in canceling their annual meeting for our Golden Anniversary Meeting and also for the excellent scientific program which they have provided for us.

W. Raymond McKenzie, M.D.
President, Southern Medical Association

THE PHYSICIAN'S RESPONSIBILITY IN DIABETES DETECTION

If every patient had his physician perform a routine urinalysis each year there would be no need for the annual Diabetes Detection Drive. Unfortunately, patients do not realize the importance of early diagnosis and many physicians have neither the time nor the inclination to test urine. Approximately 1 per cent of our population have unrecognized diabetes mellitus. It is our

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.

responsibility to find and treat them. In sponsoring this ninth Annual Diabetes Detection Drive, November 11–17, the Diabetes Association of the District of Columbia hopes to reach those patients who fail to have their urine tested by their family doctor. We also hope to stimulate physicians and laymen alike to think of the possibility of diabetes when abnormal symptoms appear. We are fortunate in having the coöperation of the Medical Society of the District of Columbia as well as the medical societies of Arlington, Alexandria, Fairfax, Montgomery, and Prince Georges Counties. The Health Departments of the District of Columbia and the surrounding counties are participating. Several hospitals and commercial laboratories are helping to perform the tests free. The druggists in the metropolitan area will pay for and distribute the individual Drey Pak tests.

As in the past the Drey Paks will be bought and distributed by the drug stores to their customers throughout the area. After being dipped in a urine specimen these are mailed to the District of Columbia Health Department and tested for sugar by volunteer personnel of the Diabetes Association. All patients with positive tests will be notified to see their family doctor. In the past there has been some confusion as to what should be done to establish or exclude the diagnosis of diabetes. Some physicians have done too much, with the result that the patient questions his motives and the motives behind the Diabetes Detection Drive. Other physicians have not done enough, with the result that many patients were not diagnosed as having diabetes even though they had glycosuria. The absolute minimum test that should be done on any patient with glycosuria is to collect a blood specimen 2 hours after a meal containing about 100 grams of carbohydrate and test it for sugar. If the blood sugar is below 120 mg. per 100 ml. (Folin-Wu), diabetes is excluded. If the blood sugar is above 150 mg. per 100 ml., diabetes is present. Between these levels an oral glucose tolerance test should be done for more precise diagnosis. A normal fasting blood sugar does not exclude diabetes mellitus. A glucose tolerance test is a useless extravagance in a patient with a markedly elevated fasting or postprandial blood sugar. The Health Department Clinic at Polk School will perform blood sugar tests on all patients who cannot afford to pay commercial laboratory fees.

James M. Moss, M.D.
President, Diabetes Association
of the District of Columbia

THE DILEMMA OF PSYCHIATRY IN THE NATION'S CAPITAL

The number of practicing psychiatrists in the Washington Metropolitan Area has increased greatly since 1946. There are now well over 300 qualified psychiatrists, and the number is constantly growing. However, the problem of what to do with the emotionally disturbed patient who requires short-term hospital treatment remains unsolved, chiefly because of the lack of adequate hospital facilities. Although Washington has become well known as a psychiatric training center, it has lagged far behind all other major cities in establishing desperately needed psychiatric units in its general hospitals.

During the last 10 years several new hospitals were built, but George Washington University Hospital was the only one that included a psychiatric unit to help fill this great need. This excellent, but overworked, unit of 25 beds has been almost constantly filled from the beginning. There is usually a waiting list, requiring up to 10 days' delay in admitting a new patient. For this reason it has been of little use in coping with the psychiatric emergencies of general and specialized practice.

It was hoped that other new hospitals would recognize the crying need and follow suit. The great opportunities for community service, teaching, and research seemed obvious. But this failed to materialize. Georgetown University Hospital was opened in 1947 without a psychiatric unit, and it is doubtful if one will be included in future expansion. The new Providence Hospital has no psychiatric beds. Due in large measure to the active interest of a small group of psychiatrists in the Washington Psychiatric Society, the new Hospital Center on the Soldiers' Home grounds will have a psychiatric unit of 33 beds. This will be of some help, but even this addition will fall far short of filling the actual need.

Recently has come the welcome news that a 25-bed psychiatric unit is being considered for the new Sibley Hospital now in the planning stage. It is hoped to provide a unit of such attractive and modern design that it will be equally suitable for almost all types of patients requiring short-term hospital treatment.

It is doubtful if the Washington psychiatrist can study and treat certain of his patients properly until he has the same type of hospital facilities at his disposal as does his medical colleague. The physician who is confronted by a diagnostic or therapeutic problem can send his patient into a hospital for a period of medical observation, study, and treatment. The same opportunities should be made available to the psychiatrist by every hospital in Washington.

There is another important reason for the psychiatric unit which is unique to psychiatry. The immediate availability of such a unit in our general hospitals would do much to avert the great dislocations which occur when a patient must be sent to a distant sanitarium or committed to a mental hospital. Dr. C. H. Campbell stated the problem well when he said, "Dread of commitment to an asylum is an experience almost universal to the psychiatric patient. . . . Patients manifesting a nervous illness first should be sent to a general hospital wherein facilities for modern treatment are present."[1]

Most authorities state that 10 per cent of the beds of any new general hospital should be devoted to psychiatry. If this goal is ever attained the general hospital would become "general" in fact as well as in name. In view of the increasing incidence of psychiatric disorders it seems clear that any new hospital planned without a psychiatric unit is obsolete before it is completed. The Committee on Mental Health of this Society is now making a special effort to bring these facts to the attention of all medical and lay leaders engaged in new hospital programs. It is hoped that the new units being built or planned are straws in the wind. Perhaps we are witnessing the beginning of a trend in hospital design which will do much to resolve the dilemma of psychiatry in the Nation's Capital.

ZIGMOND M. LEBENSOHN, M.D.
Chairman, Committee on Mental Health

---

[1] CAMPBELL, C. H.: What type of hospital for the mental patient? Hospital Management, May 1946.

In and Out of Focus

BY THE OBSERVER

Science Fairs

If favorable comments are a criterion, the American Medical Association's 1956 Public Relations Institute held in Chicago last August was the most successful to date. Not only were the subjects under discussion of a timely and practical nature, but the manner in which they were presented was unusually effective.

Your Observer was especially impressed with the youth of the majority of the speakers and their obvious capabilities. Most of them were lay executives of medical societies; however, there were a number of physicians, too. The vigor and enthusiasm of this group certainly augurs well for organized medicine.

Credit for the selection of subject material and the speakers goes to the AMA's Department of Public Relations, which has a highly capable and efficient staff headed by the Department's Director, Leo E. Brown.

Among the many presentations, the one which held the greatest interest for your Observer was the discussion of "Local Science Fairs: The 1956 PR 'Plum.'" Science fairs are not new, but medical participation in them is. Such fairs have grown rapidly since 1950 under the guidance of Science Service, a nonprofit organization with headquarters in Washington, D.C. Not all fairs are sponsored by the Service's affiliates. Many are independent projects. Without exception, they are underwritten financially by interested groups in the community.

Science Fairs are invariably school projects; that is, participants are students, often from the lowest grades up to and including the last year in high school. Reasons for this were explained by Joseph H. Kraus, Coördinator of the National Science Fair, in an address at the Institute: "It has long been recognized by scientists, educators, and psychologists that a leaning toward interest in scientific pursuits may start at a very early age in life. In an effort to bring the motivation toward science to more students, and during their formative years, we encourage the development of Science Fairs.

"A typical Science Fair is a collection of exhibits, each of which is designed to show a biological, chemical, physical or technical principle. It may be a laboratory procedure, industrial development, or an orderly collection of anything which can be fitted into the broad concept of any branch of applied science.

"In 1950 the first National Science Fair was launched. Thirteen area fairs were represented. This year nearly 8½ times that many, 110 regional fairs, were affiliated with the National. This year also marks the first participation in this program by the American Medical Association—an association of which we are very proud."

The first medical organization to lend its support to the Science Fair in its community was the Porter County (Indiana) Medical Society. Dr. Ralph Eades, Past President of the Society, was on the panel at the Institute to discuss his organization's experience with the project. He told a simple story about a group of youngsters who in 1951 appealed to the Society for financial and moral support. The Society voted to give the needed assistance. The undertaking was so successful that Dr. Eades and his associates have become Fair enthusiasts.

Dr. Eades said, "The Science Fair is the best public relations prospect we have had in the past 25 years. The Science Fair program is strictly American, an entirely voluntary effort to allow boys and girls throughout the land to develop themselves to the limit in so far as they desire. It is also a fine anti-delinquency program. Its ubiquity compares favorably with our own AMA, and its component parts reach down to a grass roots organization providing boys and girls with the best opportunities to be found anywhere in this world."

Mr. John E. Farrell, Executive Secretary of the Rhode Island Medical Society, made a telling point when he said: "A year ago a leading pharmaceutical company reported that 23 out of every 100 U.S. public high schools offer neither physics nor chemistry courses; 24 offer no geometry. Between 1950–55, the number of science and engineering graduates of American colleges dropped more than 50 per cent. High school enrollment climbed 16 per cent in the past 5 years, but the number of qualified science teachers dropped 53 per cent.

"Consequently, every group who participates in the Science Fair project is performing an outstanding service because the continued success of our industries and professions depends on an adequate supply of scientists and technologists."

Our Medical Society has to date given only modest financial support to the Science Fair locally. The Committee on Public Information believes that it is time for the Society to get behind this fine movement wholeheartedly. At a recent meeting, the Executive Board concurred. Further developments can therefore be expected.

★

The Bradley Report The long-awaited Bradley report was made public on April 23, 1956. The significant portions of medical interest in this report, entitled "Veterans' Benefits in the United States," which follow, appeared in the August issue of the AMA's *Federal Medical Services Newsletter.*

The President's Commission on Veterans' Pensions, which made a comprehensive survey and appraisal of veterans' benefits, was headed by General Omar N. Bradley, former Administrator of Veterans Affairs. Serving with him were a number of distinguished citizens, including one physician, Dr. Paul R. Hawley, Director of the American College of Surgeons.

The Commission was directed by the President to give particular attention to three points: (1) the basic changes in our society affecting the role of (veterans') benefits; (2) conditions under which these benefits should be provided to different categories of veterans; (3) the relationship of veterans' benefits to each other, to military benefits and to Social Security and other benefits granted without regard to veteran status.

As to the scope of the investigation, it was confined to compensation, pension, and related non-medical benefits. The Commission was not authorized to study the VA medical care program itself. However, as the *Newsletter* points out, many portions of the Commission's report and recommendations have a direct bearing on this program.

Because of lack of space it is not possible to incorporate the highlights of the report in this column. However, the salient points, so far as physicians are concerned, can readily be pointed out. Veterans' programs, the Commission states, are looking backward, not forward, and changes in our military, economic, and social conditions already have outmoded early conceptions of veterans' benefits; therefore, the program should be modernized. The Government's obligation, it is stated, is to help veterans overcome special, significant handicaps incurred as a consequence of their military service. The objective should be to return veterans as nearly as possible to the status they would have achieved had they not been in military service.

". . . In the opinion of the Commision, veterans with no service-connected disability after readjustment should be considered to be in the same category as citizens who are not veterans." The Commission offers the suggestion that the present nonservice-connected benefits be continued only as a supplementary program, until nation-wide public assistance programs are considered adequate to serve all needy citizens.

The following significant changes which have taken place in our society during the past few years, the Commission observes, will vitally affect the veterans' programs:

"(1) Veterans and their families will soon constitute a majority of the population. In 1940, they were only 11 per cent of the population; now they are 45 per cent. If those still in the Armed Forces are included, veterans and their families constitute 49 per cent of the population.

"(2) Conditions of military service have improved vastly in recent years. Not only have pay and care improved, but specialized military training has become of more value in civilian life.

"(3) New methods of warfare and security requirements have changed the relative status of soldier and civilian. We have conscription in peacetime and the civilian population, as well as the military, undergoes ordeals and dangers.

"(4) The basic needs of all citizens for economic security are being increasingly met through general Federal, state, local and private programs.

"(5) Today, the veteran is better off economically than the nonveteran in the same age group. Special surveys made by the Commission Task Force show the average veteran has a higher income and more education than the nonveteran, especially if he used the readjustment benefits.

"(6) Today, we have the most liberal and comprehensive veterans' benefit programs in the world. In 1940 we spent $560 million on veterans' benefits; our average now is $4.5 billion; present laws will bring the total to $6 billion a year by the end of the century. 'Since veterans now constitute two-fifths of our workers and their incomes are higher than average, the veterans as a group themselves bear much of the cost of veterans' benefits.'"

The Commission made some 70 recommendations, supported by detailed arguments and considerable data. Space permits only the mention of a few of these which bear directly upon the veterans' medical program.

Emphasized again is the fact that primary consideration should be given to veterans whose disabilities have a direct connection with their military service. The ordinary or nonservice-connected needs which veterans have in common with all citizens "should be met wherever possible through the general welfare programs under which veterans are covered along with other people." The Commission, however, suggests a "continuing research program on economic and social conditions of veterans and nonveterans," and that we should not "commit future generations to obligations that we ourselves are unwilling to shoulder."

Another recommendation proposed the reëxamination of the validity of compensation for disability under 30 per cent. This recommendation reads: "(a) A rebuttable presumption of sound condition upon entry into service is acceptable as a 'base line' and should be retained. (b) The presumption of service connection for chronic diseases, tropical diseases, psychoses, tuberculosis, and multiple sclerosis as now listed should be withdrawn."

Rehabilitation, it is proposed, should be made an integral part and a prerequisite for compensation.

The Commission concludes its report by reiterating its concern for the Nation as a whole. 'Today," the report states, "the Government 'serves all the people in many of the ways that were once the exclusive prerogative of the ex-serviceman. This change, combined with the tremendous increase in the number of veterans, creates interrelationships with the total problems of government and society that must spell the end of a Veterans' Administration rigidly compartmentalized from the rest of the Government."

★

Soul Searching As every physician knows, the American Medical Association and a number of state and county medical societies have placed great emphasis in the past few years on their public relations programs. Those who have familiarized themselves with these programs have with few exceptions been favorably impressed, for there is no denying that they have created much goodwill in areas where before it was nonexistent.

Convinced as medical leaders are that the sizable expenditures for this purpose are bringing commensurate returns, they are conscious of a disquieting note in an otherwise satisfying situation. It appears that things are not going so well inside organized medicine's house. A recent nation-wide survey of physicians commissioned by the AMA shows that the internal affairs of medical organizations are in need of attention, because, the report states, these organizations are "not hitting on all cylinders." The primary difficulty, we are told, can be summed up in two words—"faulty transmission."

As the Special Bulletin of the AMA puts it, "It's obvious that some concentrated internal public relations efforts are necessary in order to rekindle physicians' enthusiasm and interest in medical organizations. Larger numbers of physicians ought to be pulling their own weight in their societies, rather than dragging their heels and allowing a few men to serve as standard bearers. Medical organizations must concentrate on doing a better job of informing their members about their activities, policies, and services."

Pointing up this situation, the Bulletin states, are the following findings of the AMA's surveyors:

Only half the physicians in this country report they are active in county and state organizations. One doctor in four says he didn't vote in his local society's last election. About half of the doctors think of county and state societies as being different from AMA, when in reality these organizations compose the national association.

Ninety per cent of doctors in private practice report they are members of the AMA. More than half of the AMA members surveyed reported they belong to the Association because it's customary, it's the doctors' organization, or they believe in its policies. Yet 15 per cent say membership is necessary for hospital affiliation or that it's compulsory. Informed physicians know that hospitals, not medical societies, determine rules and regulations for securing hospital privileges. And, no physician is forced to associate himself with any medical organization; if he joins, he does so voluntarily.

Fifty per cent of the doctors attend most meetings of their local or county society. Yet 6 per cent say they attend no meetings, 16 per cent very few, 9 per cent some, and 9 per cent half. The problem of meeting attendance appears to be greatest in the East, where only 38 per cent of the doctors say they attend most meetings. Western states evidently chalk up the greatest attendance since 61 per cent of the doctors say they turn out for meetings. Central and Southern states fall midway between, with 54 per cent in the Midwest and 56 per cent in the South attending most meetings.

Thirty-five per cent of the internists say they attend most meetings as contrasted with an average of 50 per cent of all other types of doctors. Internists also least often say they voted in the society's last election of officers.

The Bulletin concludes, "All along the organizational line, it's apparent that a better informational job needs to be done. The aid of state and county groups is needed to help sell physicians on the merits of coöperative action through medical organizations. For when a physician criticizes AMA, he is actually criticizing his local society and his state association, too. When his society joins in the complaining, the breech within the ranks widens."

There is little cause for complaint about the support—financial and otherwise—given our Medical Society by its members. However, it cannot be denied that communications between the Society and its members are in need of improvement, because it has frequently become apparent that many physicians have little conception of the Society's activities.

A serious effort will be made to remedy this situation in the coming fall and winter, when a monthly news bulletin will make its appearance together with a pamphlet describing the Society's activities and a manual for physicians. The latter are in the process of preparation. All of these are intended to enlighten our membership and to further stimulate their interest, pride, and support.

"...The GP... King-Pin..."

In the introduction of his Presidential Address, Dr. Alexander Hall, recently installed President of the British Medical Association, referred to the fact that only three general practitioners in half a century had been chosen head of the Association. Later in his address, he made a point of the fact that he was taking office at a time when the GP's position in England was at a very low ebb.

In elaborating upon the reasons for this situation, he said, "The essential cause for the lowered prestige of the family doctor lies, I believe, in the National Health Service." He went on to say that the Act creating NHS had altered the relationship between doctor and patient, introducing the State as a third party. Secondly, it had unfortunately been heralded as a free service, leading to irresponsible demands. Finally, "what was worse . . . specialist services were heralded as something new and superior, and available to every citizen for the first time; by comparison, the family-doctor service was thus presented as a second-rate affair with very limited capacities. Denial to the family doctor of diagnostic facilities in the X-ray department and the laboratory except through consultant and specialist exaggerated the apparent incompetence of the general practitioner, while the denial of his right of access to hospital beds even for midwifery completed the ignominy and altogether undermined confidence in him."

"Naturally," he continued, "the public came to demand more and more specialist services, usually at or in hospital, nothing short of which, they were led to believe, was the best . . . ."

Apparently, the situation has not improved materially since the inauguration of the Service, even though, as Dr. Hall says, "From recent pronouncements it is clear that both the [British Medical] Association and the Government are aware that the role of the general-practitioner service is paramount and that it must be sustained as a first-class force. In a speech last year at Birmingham, Mr. Iain Macleod, then Minister of Health, said that five principles had guided his thinking in office. He enunciated one of them in these words: 'I think we ought to make—and for it to be seen that we are making—the general practitioner the king-pin of the whole of the National Health Service in this country.' "

To this Dr. Hall retorted, "If the Government continues to damn the general-practitioner service with faint praise or to present it to the country not as the dog but as the tail, and a very short one at that, it is not letting it be seen that it is making the family doctor the king-pin of the whole of the National Health Service in this country."

The real bone of contention is the lack of hospital privileges for general practitioners. Your Observer inquired into this situation a few months ago in a conversation with British NHS officials. He was told that the standards in general practice are being raised. Internship is now being required before a physician can practice. If he is going to obtain a desirable location, he finds it advantageous to have had a year's preceptorship with an experienced general practitioner. This may conceivably lead to hospital privileges, although this eventuality was not suggested.

Aside from the BMA, the College of General Practitioners, a comparatively new organization, patterned, your Observer understood, after the American Academy of General Practice, is active in behalf of British GP's. Unfortunately, he did not have an opportunity to discuss the situation with any of the College officials.

Not all physicians concur in the views expressed by Dr. Hall. For example, in an article entitled "The Pattern of General Practice," which appeared in *The Lancet* for May 5, 1956, Dr. A. G. Richards, of Saskatchewan, Canada, states that "the pattern of general practice is largely determined by factors not easily modified by doctors or legislators—e.g., density of population, ease of communications, capital resources, and the prosperity of the community. Whereas specialist practice is basically the same the world over, general practice must adapt itself to local circumstances.

"To be constructive, criticism should be directed against conditions of general practice that can be modified, and against failure to adapt to those conditions that must be accepted. To set before future general practitioners an ideal type of practice which is unattainable is unfair, and also a disservice to their patients."

"General practitioners," Dr. Richards continues, "usually attribute the small number of hospital beds available to them to arbitrary regulations or selfishness on the part of specialists, rather than to an inherent feature of British medical practice. Many doctors feel that their prestige is impaired by lack of hospital privileges, but British patients expect to be referred to specialists for major procedures and they do not think less of their own doctor because of this . . . .

"The general practitioner is taught as a student principally about diseases which are best treated in hospital, and he tends to think that hospital practice is the most important aspect of medicine. This is bad because he will be frustrated at being unable to practice the sort of medicine he was taught, and also because, in his quest for hospital privileges and impressive equipment, he may be diverted from his role of adviser and friend to his patients . . . .

"Until he has had much experience," Dr. Richards concludes, "he tends to judge the quality of general practice by specialist criteria, and feels that he should be using methods appropriate to dealing with disease at the specialist level. Since he has to deal with comparatively large numbers of patients, inevitably part of his work consists in 'screening' or selecting those most suitable for specialist treatment. This should cause no shame and is an important part of his function as part of the medical team. Specialists appreciate the general practitioner who uses them efficiently on behalf of his practice."

From what your Observer gathers, Dr. Richard's views are not for the most part acceptable to the vast majority of GP's in Britain. British GP's believe, with Dr. Hall, that "general-practitioner service [in their country] is not in good heart, that it needs resuscitation if it is to survive."

★

First Impressions

Dr. Blank was in a slow burn over a medical news story which, he said, placed the American Medical Association in a bad light. Why, he sputtered, couldn't something be done about it. All the good publicity which the Association had received in recent months was negated by this one story.

This particular story, he said, was based on an ill-conceived and badly worded resolution introduced in the AMA's House of Delegates. If just a little thought had gone into its preparation, he observed gloomily, much criticism of the Association could have been avoided. He recalled other instances where individualistic delegates had dropped blockbuster resolutions "in the hopper" without consulting their fellow delegates. Bad as some of these were from a public relations standpoint, off-the-cuff statements by medical society officials had on occasion an equally devastating effect. For the life of him, he couldn't understand the failure of some physicians to realize the impact on the public of what they had to say about controversial medical issues.

The three State Medical Society officials to whom Dr. Blank was speaking were sympathetic. However, they were unanimously of the opinion that just nothing could or should be done about such things. It was a case of taking such precautions as were possible, then accepting the good with the bad. Enlarging upon this thesis, one SMSO said, "I have heard doctors bewail the ineptness of the AMA and its poor publicity for years. I do not deny that it has some basis in fact, but I do say that its good publicity far exceeds the bad. As for the effect of the so-called bad, it has in my opinion been exaggerated. Certainly, if we are to believe the AMA's recent opinion poll, that is true."

The second SMSO volunteered, "In my opinion, critical news stories are not necessarily bad. No organization is perfect, certainly not one with as large a membership as the American Medical Association. Naturally in such a vast body, there exist many shades of opinion, and some of these would hardly pass muster with any of us here. There is only one thing which in my opinion justifies concern—that is, if enough physicians express opinions obviously harmful to the medical profession which are of a pattern and which do not reflect the views of the majority. Personally, I do not think this situation exists."

Dr. Blank admitted that these arguments had validity, but he plaintively insisted that it made him sick to see the best efforts of the very effective Public Relations Department blunted by medicine's own mistakes.

The third SMSO, who had been listening intently, finally said his piece. "I agree we need to be concerned when injurious statements are of a pattern. However, I am more concerned that we put first things first in our beliefs and actions. We are making a grievous mistake if it isn't made clear to the public that where we are concerned the patient comes first. If we honestly adhere to this course, we need not be troubled about what we are told is bad publicity.

"I wonder if the thing which is bothering Dr. Blank isn't the fact that his colleagues who get off the reservation are expressing views once held by the AMA, which were subject to widespread criticism, and which it has now rejected. An example is the AMA's opposition to voluntary health insurance in the early 1930's. This stirred up considerable controversy and much critical comment, the AMA being charged with being reactionary. Many people, including those who write for our newspapers, have not forgotten this.

"Which brings me to the point of my remarks, that critical comments about the AMA and medical societies in general, especially those appearing in the press, are frequently based on first impressions rather than subsequent developments. I can tell you that this has been a source of irritation to me for a long time. I'm sure Dr. Blank, like the rest of us, would like to put these impressions in cold storage, for they no longer have any validity. But it seems they refuse to lie dormant.

"First impressions are indeed hard to dispel. Only time and sound policies will accomplish this. In the meantime, let us not get too excited about the publicity we are receiving, providing

(*Continued on page 586*)

Golden Anniversary Meeting

Southern Medical Association

SHERATON-PARK HOTEL

Washington, D.C.

November 12–15, 1956

Southern Medical Association

Dr. W. R. McKenzie
President

Dr. J. P. Culpepper
President-elect

GOLDEN
ANNIVERSARY
1906
1956
SOUTHERN MEDICAL ASSOCIATION

The Medical Society of D. C.

Dr. R. M. Caulk
President

Dr. J. W. Watts
President-elect

AN OPPORTUNITY . . .

All members of the Medical Society are urged to register for and attend the sessions of the Southern Medical Association as its invited guests and to help celebrate this great Medical Association's Fiftieth Anniversary. The generosity of this Association in designating the first day as District of Columbia Day has given us an opportunity to plan an excellent scientific program under the direction of Dr. Marcel Foret.

The two concurrent sessions of the opening day will do justice to the preëminence of the Washington Metropolitan Area in the field of medicine. In addition, many Washington physicians will participate in the sectional scientific sessions and in the scientific exhibits of the Southern's meeting.

Inasmuch as this is the only major medical meeting available locally to Washington physicians in this calendar year, members of the Society should, and I am sure will, take advantage of this opportunity.

Make it a point to attend the District of Columbia Day program and other scientific sessions of your interest. This is the one occasion on which we assume the dual role of both a host to, and a guest of, the Southern Medical Association in the celebration of its Golden Anniversary.

Ralph M. Caulk

President, The Medical Society of the District of Columbia

Southern Medical Association

The story of the Southern Medical Association parallels the story of medical society growth and progress in the South.

Prior to 1906, in addition to the active state societies, there was a Tri-State Medical Association of Alabama, Georgia, and Tennessee that met in the fall at Chattanooga. This Association had been organized by Dr. J. B. Cowan of Tullahoma, Tenn. A prominent physician, he had been chief surgeon on the staff of Lt. General Nathan Bedford Forrest.

Dr. G. C. Savage, Nashville, President of the Tennessee State Medical Association, issued an invitation to the physicians of Alabama, Georgia, Florida, Louisiana, Mississippi, and Tennessee to meet at the Read House in Chattanooga, on October 2, 1906, during the Tri-State meeting, for the purpose of organizing a Southern Medical Association. A Constitution and By-laws was adopted on October 3.

Since 1915, the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia, and the District of Columbia have composed the territory of the Association.

From the beginning, the Association recognized the increasing interest in specialty practice and the need for scientific programs which would present not only material of general interest, but also would appeal to the specialist and general practitioner alike.

In 1906, the scientific assembly was composed only of the sections on Medicine, Surgery, and Ophthalmology and Otolaryngology. From 1911 to 1942, 18 more sections were added in the following order: Public Health, Industrial Medicine and Surgery, Medical Education and Hospital Training, Pediatrics, Gastroenterology, Urology, Obstetrics, Orthopedic and Traumatic Surgery, Radiology, Neurology and Psychiatry, Dermatology and Syphilology, Pathology, Gynecology, Allergy, Anesthesiology, Proctology, General Practice, and Physical Medicine and Rehabilitation.

In 1921 the Association acquired the *Southern Medical Journal* by purchase from Dr. Seale Harris of Birmingham. Since then it has had two editors, Dr. M. Y. Dabney, Birmingham, who served from November, 1921, to December, 1954, and Dr. R. H. Kampmeier, Nashville, the present Editor, who assumed office January 1, 1955.

Today, with 10,000 members, the Southern Medical Association presents a scientific assembly that is second to none in versatility, quality and variety. Meeting annually in the larger cities of the South, the annual meeting attracts four to five thousand registrants.

The Association is now the second largest general medical association in the United States. Its *Journal*, with a circulation of 10,700 copies monthly, contributes some 300 articles annually to the medical literature.

OFFICERS

SOUTHERN MEDICAL ASSOCIATION

President: W. Raymond McKenzie, Baltimore
President-elect: J. P. Culpepper, Jr., Hattiesburg, Miss.
First Vice President: W. Kelly West, Oklahoma City
Second Vice President: Denton Kerr, Houston
Advisor and Professional Relations Counselor: Mr. C. P. Loranz, Birmingham
Executive Secretary and Treasurer: Mr. V. O. Foster, Birmingham

Councilors

J. Morris Reese, *Chairman*, Baltimore, Md.
A. Clayton McCarty, *Vice Chairman*, Louisville, Ky.
Lee F. Turlington, Birmingham, Ala.
Fount Richardson, Fayetteville, Ark.
Harry Lee Claud, Washington, D. C.
Joseph S. Stewart, Miami, Fla.
Jack C. Norris, Atlanta, Ga.
J. Kelly Stone, New Orleans, La.
J. F. Lucas, Greenwood, Miss.
Grayson Carroll, St. Louis, Mo.
H. L. Brockmann, High Point, N. C.
Henry H. Turner, Oklahoma City, Okla.
J. W. Jervey, Jr., Greenville, S. C.
Charles R. Thomas, Chattanooga, Tenn.
Robert D. Moreton, Fort Worth, Texas
Donald S. Daniel, Richmond, Va.
V. Eugene Holcombe, Charleston, W. Va.

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

President: Ralph M. Caulk
President-elect: James W. Watts
First Vice President: Irving Burka
Second Vice President: Shirley S. Martin
Secretary-Treasurer: Mr. Theodore Wiprud

Executive Board

Wallace M. Yater, *Chairman*
Ralph M. Caulk
Raymond T. Holden
Preston A. McLendon
W. Ross Morris
Herbert P. Ramsey
James W. Watts
Mr. Theodore Wiprud, *Secretary, ex officio*

District of Columbia Day

SCIENTIFIC PROGRAM

TWO SESSIONS WILL BE IN PROGRESS SIMULTANEOUSLY IN ROOMS A AND B, SHERATON-PARK HOTEL

ROOM A

MONDAY, NOVEMBER 12—MORNING SESSION

John Alfred Reisinger, M.D., *Presiding*

Immediate Past President, Washington Heart Association

10:55 OPENING REMARKS

Ralph M. Caulk, M.D.

President, The Medical Society of the District of Columbia

11:00 SERUM GLUTAMIC-OXALACETIC TRANSAMINASE (GOT) IN MYOCARDIAL INFARCTION

Bernard H. Ostrow, M.D.

Clinical Instructor in Medicine, George Washington University School of Medicine

11:20 WHO SHOULD AND WHO SHOULD NOT HAVE CARDIAC SURGERY?

Bernard J. Walsh, M.D.

Clinical Associate Professor of Medicine, Georgetown University School of Medicine; President, Washington Heart Association

11:40 THE MECHANISM OF ACTION OF THE RAUWOLFIA DRUGS

Luther L. Terry, M.D.

Chief, Clinic of General Medicine and Experimental Therapeutics, National Heart Institute, Public Health Service

MONDAY, NOVEMBER 12—AFTERNOON SESSION

Marcel J. Foret, M.D., *Presiding*

Chairman, Program Committee, District of Columbia Day

2:00 A PRACTICAL PLAN OF FLUID THERAPY

Joseph M. LoPresti, M.D.

Assistant Professor of Pediatrics, George Washington University School of Medicine

2:20 PULMONARY PATTERNS IN HISTOPLASMOSIS

Sol Katz, M.D.

Chief of the Division of Pulmonary Diseases, District of Columbia General Hospital; Adjunct Clinical Professor of Medicine, Georgetown University and George Washington University Schools of Medicine

J. Winthrop Peabody, Jr., M.D.

Instructor in Thoracic Surgery, Georgetown University School of Medicine

2:40 USEFULNESS AND LIMITATIONS OF ADRENAL CORTICAL STEROID THERAPY

Delbert M. Bergenstal, Ph.D., M.D.

Senior Surgeon, National Cancer Institute, Public Health Service

3:00 RECESS

3:30 THE PROBLEM OF LYMPHEDEMA OF THE ARM FOLLOWING POSTOPERATIVE IRRADIATION FOR CARCINOMA OF THE BREAST

John P. Haberlin, M.D.

Assistant Professor of Surgery, Georgetown University School of Medicine

Murray M. Copeland, M.D.

Professor and Director of Department of Oncology, Georgetown University School of Medicine

3:50 The Surgical Treatment of Emphysematous Bullae
Brian Blades, M.D.
Professor and Director of the Department of Surgery, George Washington University School of Medicine

4:10 The Definitive Treatment of Arteriosclerotic Obstructive Lesions
Charles A. Hufnagel, M.D.
Director of Experimental Laboratory in Surgery, Georgetown University School of Medicine

ROOM B

MONDAY, NOVEMBER 12—MORNING SESSION

William E. Bageant, M.D., *Moderator*

Chief of Anesthesia, Garfield Memorial Hospital

10:55 Opening Remarks: **Ralph M. Caulk, M.D.**
President, The Medical Society of the District of Columbia

11:00 Panel Discussion on Preoperative Evaluation and Choice of Anesthesia in Surgical Patients with Reduction of Circulatory Reserve

Choice of Anesthesia of the Surgical Patient with Cardiac Disease
Charles S. Coakley, M.D.
Professor of Anesthesiology, George Washington University School of Medicine

Cardiac Irregularities during Anesthesia and Surgery
Clayton B. Ethridge, M.D.
Clinical Professor of Medicine, George Washington University School of Medicine

Preoperative Evaluation of the Surgical Patient with Cardiac Disease
John M. Evans, M.D.
Associate Professor of Medicine, George Washington University School of Medicine

The Effect of Anesthetic Agents on the Heart and Circulation
Colonel Harvey C. Slocum, MC, USA
Chief of Anesthesia and Operating Section, Walter Reed Army Hospital

MONDAY, NOVEMBER 12—AFTERNOON SESSION

Ralph M. Caulk, M.D., *Presiding*

2:00 Carcinoid as Endocrine Tumor
Albert Sjoerdsma, M.D., Ph.D.
Clinical Investigator, Clinic of General Medicine and Experimental Therapeutics, National Heart Institute, Public Health Service

2:20 Common Problems in Treating Ulcerative Colitis
Garnet W. Ault, M.D.
Professor of Proctology, Georgetown University School of Medicine

2:40 Emergency Definitive One-stage Surgery for Intestinal Obstruction
William H. Ferguson, M.D.
Washington
William W. Chase, M.D.
Chairman, Board of Surgery, Garfield Memorial Hospital

3:00 Recess

3:30 How Practical Is the Cervical Smear in the Detection of Cancer?
Robert B. Nelson, M.D.
Washington
Edward W. Nicklas, M.D.
Washington
Theodore Winship, M.D.
Senior Attending Pathologist, Garfield Memorial Hospital

3:50 Abruptio Placentae and Hypofibrinogenemia
Howard A. Donald, M.D.
Washington

4:10 The Indiscriminate Use of the Midline Episiotomy
Samuel M. Dodek, M.D.
Associate Clinical Professor of Obstetrics and Gynecology, George Washington University School of Medicine

Special Events on D.C. Day

Luncheons Some 19 alumni and fraternity groups will sponsor special social events during Southern's Golden Anniversary Meeting. Two luncheons of special interest to Washington physicians will be held on D. C. Day, those sponsored by the Georgetown University Medical Alumni Association and the George Washington University Medical Society. Both will be held at the Sheraton-Park Hotel, the Georgetown in the Burgundy Room and the George Washington in the Continental Room. Tickets for the luncheons will be available at the Registration Section in the Foyer of the Sheraton-Park Hotel.

Awarding of Certificates On Monday evening, November 12, there will be a General Session in the Grand Ballroom of the Mayflower Hotel beginning at 8 p. m. The Medical Society's President, Dr. Ralph M. Caulk, will give the welcoming address and will present the Society's two annual awards.

Dr. Nicholson

Mr. Himes

The Society's Certificate for Meritorious Service will be given to Dr. Margaret M. Nicholson, internationally known Washington pediatrician. Mr. Joseph H. Himes, distinguished community leader and President of Group Hospitalization since it was established in 1934, has been selected to receive the John Benjamin Nichols Award for lay leadership in the health field.

Following presentation of the awards, Dr. W. Raymond McKenzie, of Baltimore, President of the Southern Medical Association, will deliver his Presidential Address. There will be a special commemorative service in recognition of Southern's Golden Anniversary. Featured too will be a musical interlude by the Washington Doctors' Symphony Orchestra.

Auxiliary Functions The Woman's Auxiliary to the Southern Medical Association has planned a full schedule of events at the Mayflower Hotel from Monday through Wednesday. Registration will open in the Promenade of the Mayflower on Sunday, November 11, at 10 a.m. Monday's special event will be a tea and a fashion show, by Julius Garfinckel and Company, beginning at 3:30 p.m. In the evening the Auxiliary will join with members of the Southern Medical Association in its special Golden Anniversary commemorative meeting.

FOURTH ANNUAL DINNER FOR DOCTORS' OFFICE STAFFS

For the fourth successive year, a dinner for doctors' staff members will be a Convention feature. There has always been an enthusiastic response to the announcement of this event, from the doctors as well as from the invited guests— the doctors' secretaries, assistants, nurses, technicians, and receptionists.

The dinner will be held in the Grand Ballroom of the Mayflower Hotel on Thursday, November 15, at 7 p.m. Dr. Edward J. Stieglitz will be the speaker. His subject will be, "Who Is Healthy?" There will also be a musical program.

Physicians are urged to purchase tickets for their staffs at $6.00 each.

REGISTRATION

Arrangements have been made to register members of the Medical Society of the District of Columbia prior to the opening of the Golden Anniversary Meeting of S.M.A. at the Society's Executive Offices on Thursday, November 8, and Friday, November 9, between 9 a.m. and 5 p.m. There will also be a special section for registering members of the District Medical Society in the Foyer of the Sheraton-Park Hotel, which will open Monday, November 12, at 9 a.m. No one will be admitted to the scientific sessions or exhibits without a badge.

Washington Committee on Arrangements

THE EXECUTIVE COMMITTEE

Dr. Caulk

Dr. Foret

Dr. Hunter

Dr. Claud

Dr. Dunkley

EXECUTIVE COMMITTEE

Oscar B. Hunter, Jr., *General Chairman*
Ralph M. Caulk
Harry Lee Claud
Richard E. Dunkley
Marcel J. Foret

ADVISORY COMMITTEE

Charles S. White, *Chairman*
Walter A. Bloedorn
George W. Calver
Francis M. Forster
Maj. Gen. Leonard D. Heaton
Rear Adm. Lamont Pugh
Leonard A. Scheele

PROGRAM, D. C. DAY

Marcel J. Foret, *Chairman*
Brooks G. Brown
Theodore Winship

SCIENTIFIC EXHIBIT

Arthur A. Morris, *Chairman*
Richard H. Fischer
I. Phillips Frohman
Eugene S. Gladsden
Preston A. McLendon
Willard P. McNeill
W. Robert Perkins, Jr.
Austin B. Rohrbaugh, Jr.
Robert C. Rush

SCIENTIFIC MOTION PICTURES

Brooks G. Brown, *Chairman*
John H. Bayly
William K. Billingsley
C. Willard Camalier, Jr.
Harold H. Hawfield
Emmett P. Madigan
H. Turner Reuter
Robert E. Stadelman
Charles E. Woodson

PUBLICITY AND RADIO

William B. Walsh, *Chairman*
William O. Bailey, Jr.
C. Willard Camalier, Jr.
Thomas E. Curtin
James E. Fitzgerald
Ernest A. Gould
Raymond T. Holden
Russel S. Page, Jr.
Paul R. Wilner

INFORMATION

August Kramm, *Chairman*
Raymond F. Chinn
Wallace H. McCune
David M. Nolan
Raymond A. Osbourn
Albert I. Robins
James H. Scully
James Stanton
Roger S. Williams

MEMBERSHIP

Alan Frank Kreglow, *Chairman*
Robert H. Barter
William F. Burdick
James W. Choate
Milton C. Cobey
Karl C. Corley
I. Phillips Frohman
Herbert S. Gates
Valentine M. Hess
Harold Jeghers
Shirley S. Martin
Clyde P. Reeves
Duane C. Richtmeyer
William T. Spence
Homer King Vann
Roger S. Williams

ALUMNI AND FRATERNITY DINNERS AND LUNCHEONS

William O. Bailey, Jr., *Chairman*
Earl B. Barnes
James E. Chapman
Enos Ray
Edward C. Wilson, Jr.

WOMEN PHYSICIANS

Helen Gladys Kain, *Chairman*
Shirley S. Martin
Esther A. Nathanson
Margaret M. Nicholson
K. Elizabeth Parker

GOLF COMMITTEE

Richard H. Fischer, *Chairman*
William J. Evans
H. Franklin Kreuzburg
William F. Luckett
Arthur A. Morris
Howard P. Parker

COMBINED MEETING OF POTOMAC AND SOUTHERN CHAPTERS OF AMERICAN COLLEGE OF CHEST PHYSICIANS

SCIENTIFIC PROGRAM

All Sessions at the Shoreham Hotel

SUNDAY, NOVEMBER 11, MORNING SESSION (PARK ROOM)

William F. Miller, M.D., *Presiding*

9:30 An Evaluation of the Yolk-sac Method as Compared with Conventional Laboratory Procedures for the Isolation of Mycobacterium Tuberculosis Hominis. John H. Seabury, M.D., Harry E. Dascomb, M.D., and Jeanne M. Mottram, B.S., Louisiana State School of Medicine.

10:00 Pulmonary and Metabolic Aspects of Cystic Fibrosis (Mucoviscidosis). Paul A. di Sant'Agnese, M.D., Columbia University College of Physicians and Surgeons.

10:30 The Current Status of the Pneumonias. Robert Austrian, M.D., State University of New York, College of Medicine.

11:00 The Pathogenesis and Treatment of Peripheral Vascular Collapse Associated with the Fulminant Diffuse Pulmonary Infiltrations. Donald W. Seldin, M.D., Southwestern Medical School, University of Texas.

12:00 Luncheon (Terrace Room) Panel on Physiologic Therapy of Bronchopulmonary Disease. William F. Miller, M.D., *Moderator,* Southwestern Medical School, University of Texas; Alvan L. Barach, M.D., Columbia University College of Physicians and Surgeons; and Maurice S. Segal, M.D., Tufts College Medical School.

SUNDAY, NOVEMBER 11, AFTERNOON SESSION (PARK ROOM)

Edgar W. Davis, M.D., *Presiding*

2:00 Application of Hypothermia in the Correction of Cardiovascular Lesions. Edward J. Jahnke, Jr., M.D., Walter Reed Army Hospital.

2:30 The Clinical Value of Transbronchial Left Heart Cathetherization. L. Biben, M.D., A.G. Morrow, M.D., H. T. Dodge, M.D., and R. P. Grant, M.D., National Heart Institute, USPHS.

3:00 Acquired Diseases of the Aorta. E. Stanley Crawford, M.D., Denton A. Cooley, M.D., Michael E. DeBakey, M.D., and Oscar Creech, M.D., Baylor University College of Medicine.

3:30 Severe Crushing Injuries of the Chest: A New Method of Treatment. Edward E. Avery, M.D., Northwestern University Medical School.

4:00 X-ray Conference. *Moderator:* Charles N. Davidson, M.D., University of Maryland School of Medicine. *Panelists:* Ross McLean, M.D., Johns Hopkins University School of Medicine; Sol Katz, M.D., Georgetown and George Washington University Schools of Medicine; and Otto C. Brantigan, M.D., University of Maryland.

6:00 Banquet (Terrace Room). Paul Turner Lecture on Carcinoma of the Lung. O. Theron Clagett, M.D., Mayo Clinic.

MONDAY, NOVEMBER 12, MORNING SESSION (TERRACE ROOM)

Roy G. Klepser, M.D., *Presiding*

9:00 The Features and Significance of Hypertrophic Osteoarthropathy. James F. Hammarsten, M.D., Veterans Administration Hospital, Oklahoma City, Okla., and John O'Leary, M.D., Oklahoma University School of Medicine.

9:30 Testing Pulmonary Function in the Doctor's Office and Small Clinic. James J. Callaway, M.D., and George R. Meneely, M.D., Vanderbilt University School of Medicine.

10:00 New Concepts of the Epidemiology of Sarcoidosis. Martin M. Cummings, M.D., Edward Dunner, M.D., Richard H. Schmidt, Jr., M.D., and John B. Barnwell, M.D., Veterans Administration, Washington, D. C.

10:30 Further Observations on the Problem of Mucoid Impaction of the Lung. Robert R. Shaw, M.D., Donald L. Paulson, M.D., and John L. Kee, M.D., Southwestern Medical School, University of Texas.

11:00 Ten Years of Tuberculosis Surgery. J. Maxwell Chamberlain, M.D., Columbia University College of Physicians and Surgeons.

11:30 Controversial Aspects of the Surgery of Tuberculosis. James D. Murphy, M.D., Veterans Administration Hospital, Baltimore.

SMITHSONIAN INSTITUTION RECEIVES ROENTGEN TUBE

ROENTGEN'S X-RAY TUBE PRESENTED TO SMITHSONIAN INSTITUTION

In special ceremonies at the National Airport, August 24, PROFESSOR WILHELM K. ROENTGEN's original X-ray tube was given to MR. ROBERT LEFEVRE, of General Electric Company, by DR. EDUARD HESS, Scientific Attaché at the German Embassy. Mr. Lefevre in turn presented the tube to MR. JOHN E. GRAF, Assistant Secretary of the Smithsonian Institution. Assembled for the presentation were (left to right): MAJOR GENERAL DAN C. OGLE, Surgeon General of the Air Force; DR. HESS; DR. LEROY E. BURNEY, Surgeon General of the Public Health Service; MR. GRAF; REAR ADMIRAL BARTHOLOMEW W. HOGAN, Surgeon General of the Navy; MR. LEFEVRE; AND MAJOR GENERAL JAMES P. COONEY, Deputy Surgeon General of the Army.

In Wurzburg, in 1895, the German physicist, Wilhelm Konrad Roentgen, discovered X-rays, thereby establishing his place in history as one of mankind's greatest benefactors. Roentgen actually used three X-ray tubes; the first two are preserved in museums in his native Germany. The third tube was turned over to the Smithsonian Institution in special ceremonies at National Airport, August 24, at 11 a.m., in the presence of officials of the German Embassy, the Smithsonian Institution, and other high-ranking officials and leaders in the fields of medicine and related sciences.

The tube, flown from Germany by Trans World Airlines, was purchased from a private owner by the General Electric Company's X-ray Department for exhibition at the Smithsonian's Gallery of Medical History. Dr. Eduard Hess, Scientific Attaché at the German Embassy, on behalf of the German Ambassador, presented the tube to Mr. Robert Lefevre, Manager of G.E.'s X-ray Department, who turned it over to Mr. John Graf, Assistant Secretary of the Smithsonian.

In expressing his gratitude to the General Electric Company for bringing this historic Roentgen tube to America, Mr. Graf said:

"It seems most appropriate that it should find its final resting place in the Smithsonian Institution, for almost 60 years ago there was published in its annual report for 1897 a translation of Professor W. K. Roentgen's original observations on his discovery of X-rays. This paper also included additional notes describing his further researches in 1896 and 1897. After describing how these new rays penetrated a thin layer of black pasteboard and caused a barium-platinum cyanide screen to fluoresce, he said, 'It is thus apparent that there is here an agency which is able to pass through the black pasteboard impenetrable to visible or ultraviolet rays from the sun or the electric arc, and having passed through is capable of exciting a lively fluorescence, and it is natural to inquire whether other substances can be thus penetrated.'

"Thus spoke an inquiring investigator and his researches conducted during the next two years proved his greatness as a scientist. Though he did not know the real nature of these rays, he had, within the short space of a few months, conducted such a broad series of tests, that he was able to explore their properties as completely as the laboratory equipment of his time permitted. He also made improvements in the vacuum tube and thus developed superior means for the production of X-rays. This work made it possible for these rays to be used in hospital practice almost at once. On January 29 and 30 of 1896, Dr. Grubbe of Chicago used X-rays for the treatment of cancer and a skin disorder. In describing one of many tests made in 1895, Professor Roentgen said, 'I have for example photographs of a piece of metal which is shown to lack homogeneity by the use of X-rays.' He early learned the difference between soft and hard rays and recognized that the latter had great penetrating power. Of a test made during 1897 he stated, 'With a tube thus become very hard I took a very fine photograph of a double barreled gun with inserted cartridges, which showed all the details of the cartridges, the inner faults of the Damascus barrels, etc., very sharply and distinctly.' Thus we see that this great scientist pointed the way to the use of X-rays not only in medicine and surgery, where they have been one of the greatest blessings ever discovered, but in industry as well."

In his brief address Mr. Graf recalled too that Dr. Grubbe's original X-ray tubes, the first ones used for therapeutic purposes, are preserved and exhibited at the Smithsonian, in the National Museum's Gallery of Medical History. In such worthy company, Roentgen's tube, he said, will be viewed by millions of visitors, who "will learn to appreciate the importance of Professor Roentgen's scientific achievements, and especially younger students of science will be inspired by Roentgen's great discovery. . . ."

Public officials, in addition to Dr. Hess, Mr. Lefevre, and Mr. Graf, who attended the historic ceremonies were: Dr. Robert Multhauf, Head Curator, Department of Engineering and Industry, Smithsonian; Mr. Frank Taylor, Assistant Director of the National Museum; Dr. George Griffenhagen, Acting Curator, Division of Medicine and Public Health, Smithsonian; Dr. Leroy E. Burney, Surgeon General of the Public Health Service; Rear Admiral Bartholomew W. Hogan, Surgeon General of the Navy; Major General James P. Cooney, Deputy Surgeon General of the Army; and Major General Dan C. Ogle, Surgeon General of the Air Force. Present from the State Department were Mr. Ernest Ramsaur, Public Affairs Advisor for German Affairs; Mr. Walter Rudolph, Assistant Science Advisor; and Mr. John Meagher, Chief of the Public Services Division.

Dr. Ralph M. Caulk, President of the Medical Society of the District of Columbia, himself a distinguished radiologist, was among the invited guests, as were Colonel E. A. Lodmell, Chief of the Radiology Department, Walter Reed Army Hospital; Captain Sylvester F. Williams, Chief of the Radiology Department, U.S. Naval Hospital; Mr. Robert Davis, of the Armed Forces Institute of Pathology; Mr. J. C. Marshall, of General Electric Company; Mr. Wert Bayne, Chief Customs Officer; and Baron Axel von dem Bussche, Information Secretary of the German Embassy.

WOMAN'S AUXILIARY NOTES

On July 1 Mrs. Albert E. Marland became the thirty-second President of the Woman's Auxiliary to the Medical Society of the District of Columbia. A member of the Auxiliary for many years, she has always taken an active part in its affairs; she has served as chairman of many committees, as historian, corresponding secretary, first vice president, and president-elect.

Known to her friends as "Doris," she was born Anne Thorne in Edgecombe County, North Carolina, the daughter of Mr. and Mrs. James H. Thorne. Although she has lived in Washington since her marriage to Dr. Marland, she is still a loyal "Tarheel." Anything pertaining to the medical profession is always of interest to her, for, in addition to her husband, her two sons, Albert E., Jr. and Jackson Thorne are practicing physicians in Washington and share offices with their father at 1216 16th Street, N.W.

Portrait by Bjorn Egeli

MRS. ALBERT E. MARLAND, SR.

President, Woman's Auxiliary to the Medical Society of the District of Columbia, 1956–1957

She says she has no hobbies, but enjoys music, books, theater,—and her bowling, of course! Besides serving in the Woman's Auxiliary she is active in the Salvation Army Women's Board, and any worthwhile philanthropic or civic project gains her support. Mrs. Marland is a member of the North Carolina Society of Colonial Dames, the Daughters of the American Revolution, the Colonial Dames Club of Washington, and the United Daughters of the Confederacy; she has served as Regent of her D.A.R. Chapter, and as President of the District Ward-Belmont College Alumnae.

Officers and chairmen serving with her for the year 1956–57 are:

Officers

President-elect: Mrs. James E. Wissler
First Vice President: Mrs. M. Noel Stow
Second Vice President: Mrs. John A. Reisinger
Recording Secretary: Mrs. J. Blaine Harrell
Assistant Recording Secretary: Mrs. James Peter Murphy
Corresponding Secretary: Mrs. Hugh O. House
Assistant Corresponding Secretary: Mrs. Clayton H. Hixson
Treasurer: Mrs. Julius J. Radice
Assistant Treasurer: Mrs. Herbert H. Schoenfeld
Parliamentarian: Mrs. Richard E. Dunkley
Historian: Mrs. Jonathan M. Williams

Chairmen of Standing Committees

Membership: Mrs. Leonard T. Peterson
Ways and Means: Mrs. Arch S. Russell, Jr.
Program: Mrs. Duane C. Richtmeyer
Social: Mrs. Charles E. Horner
Finance: Mrs. Joseph M. Daly
Publicity: Mrs. Roger S. Williams
Public Relations: Mrs. Alfred J. Suraci
House: Mrs. Francis J. Murray
Legislative: Mrs. G. Louis Weller, Jr.
Philanthropic: Mrs. Robert C. Haile
Educational: Mrs. W. Luther Hall
Today's Health: Mrs. Ralph D. Whitley
Delegate: Mrs. Lawrence A. Rapee

Chairmen of Special Committees

American Medical Educational Fund: Mrs. Harold R Downey
Visting: Mrs. George H. Crofton
Mental Health: Mrs. James P. Scanlon
Bowling: Mrs. Edgar E. Quayle
Editor of *News Letter:* Mrs. Joseph M. Rom

Mrs. Roger S. Williams
Publicity Chairman

THE AMERICAN PHYSICIAN AND THE W.M.A.

The World Medical Association has become a strong factor in protecting and promoting the professional interests of the medical profession and the cause of world peace.

Now in its ninth year, W.M.A. is a federation of the most representative national medical association in each of 52 nations. These member organizations represent more than 700,000 physicians. The American Medical Association is a leading member of the World Medical Association.

Thanks largely to the United States Committee and similar supporting committees of physicians in other leading nations, W.M.A. has a well-tried constitutional structure, a small but efficient secretariat, and a tri-lingual journal whose world-wide influence and value to the profession are rapidly growing. The permanent office of the secretariat—which serves both the Association and the United States Committee—is located in the United States.

The membership of the United States Committee has been growing slowly but steadily. In 1955, the Committee reached a membership of 5,000 American physicians. Even with this modest membership, important achievements have been registered, many of which would have been impossible if the American pharmaceutical and related industries had not consistently matched the financial support given the United States Committee by its physician-members.

The W.M.A. assists traveling physicians by providing them with introductions to colleagues in other countries, by making speaking engagements for them abroad, by acquainting them with visiting doctors from other countries, and, of course, by sending the *World Medical Journal* to members of all national supporting committees.

In 1953, the W.M.A. sponsored the First World Conference on Medical Education, held in London. Representatives from many nations have reported concrete benefits from this epochal meeting in terms of better standards and practices in medical education in their countries. A Second World Conference on Medical Education is now being planned for 1959, to be held in the United States.

Two other W.M.A. accomplishments that have brought great credit to the profession and strengthened its solidarity throughout the world were the promulgation in 1948 of the Declaration of Geneva, comprising a modern re-statement of the Hippocratic Oath, and the adoption in 1949 of an International Code of Medical Ethics.

On the international stage, the World Medical Association has endeavored to counter efforts of the International Social Security Association and the International Labour Organization to promote state medicine under social security programs. The World Medical Association has earned the respect of the I.L.O. for its defense of the interests of medicine against the International Labour Organization Convention for Medical Socialization in 1952. Now the W.M.A. is attempting to wrest from the I.L.O. the recognized world leadership in the field of occupational medicine.

The World Medical Association has engaged in efforts to protect medical research; to safeguard the National Pharmacopoeias and the rights of individuals discovering new drugs and agents to name them.

The W.M.A. has served the profession by representing it in relation to the World Health Organization, the official health agency of the United Nations. In the attempt by WHO and other agencies to draft an International Code of Medical Law, W.M.A. has insisted that such a code be based upon ethical principles acceptable to the profession.

For all these activities, and for many more which demand attention, additional funds are needed. Each new member not only contributes his nominal membership dues, but, more vitally, he lends his name and influence to the program of the W.M.A. and of its United States Committee.

Every individual physician in the U.S.A. is eligible for membership in the United States Committee. Annual membership dues are $10.00. You are urgently invited to join the United States Committee of the World Medical Association and participate in its work.

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional current books which, in their opinion, merit comment.

Epilepsy and the Law. A Proposal for Legal Reform in the Light of Medical Progress. ROSCOE L. BARROW, Dean, University of Cincinnati College of Law; Legal Adviser, Special Committee on Legislation, American League Against Epilepsy, AND HOWARD D. FABING, M.D., Past-President, American Academy of Neurology; Chairman, Legislation Committee, American League Against Epilepsy. Price, $5.50. Pp. 177. New York: Hoeber, 1956.

Practitioners' Conferences Held at The New York Hospital-Cornell Medical Center, Volume 4. Edited by CLAUDE E. FORKNER, M.D., F.A.C.P., Professor of Clinical Medicine, Cornell University Medical College; Attending Physician, The New York Hospital; Consultant in Medicine (Hematology), Roosevelt Hospital. Pp. 407. New York: Appleton, 1956.

Dermatology. DONALD M. PILLSBURY, M.A., D.SC. (HON.), M.D., Professor and Director of Department of Dermatology, University of Pennsylvania School of Medicine; Onetime Chairman, Subcommittee on the Cutaneous System and Member of the Committee on Medicine and Surgery, National Research Council; Member of National Advisory Health Council, United States Public Health Service; Director, Commission on Cutaneous Diseases, Armed Forces Epidemiological Board; WALTER B. SHELLEY, M.D., PH.D., Associate Professor of Dermatology, University of Pennsylvania School of Medicine; Chief of Dermatology Clinic, Hospital of the University of Pennsylvania; Member, Subcommittee on the Cutaneous System, National Research Council; Area Consultant, Dermatology, Veterans Administration; AND ALBERT M. KLIGMAN, M.D., PH.D., Associate Professor of Dermatology, University of Pennsylvania School of Medicine; Associate Professor of Dermatology, University of Pennsylvania Graduate School of Medicine. Price, $20.00. Pp. 1331, with 564 figures. Philadelphia: Saunders, 1956.

Ciba Foundation Symposium on Extrasensory Perception. G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.CH., AND ELAINE C. P. MILLAR, A.H.W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $6.00. Pp. 240, with 3 illustrations. Boston: Little, 1956.

Ciba Foundation Symposium, jointly with The Physiological Society and The British Pharmacological Society on Histamine in honour of Sir Henry Dale, O.M., G.B.E., M.D., F.R.C.P., F.R.S. G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.CH., AND CECELIA M. O'CONNOR, B.SC., Editors for the Ciba Foundation. Price, $9.00. Pp. 472, with 133 illustrations. Boston: Little, 1956.

On the Lighter Side

The D. C. Medical Bowling League is one month into its 1956–57 bowling season. This is the eighteenth year of the League's existence, and by tradition it should be thinking of marriage! It is certainly thinking of "boys," much more this year than last, and would welcome any of the medical and dental boys into the loving warmth of its arms. Naturally, the boys would have to coöperate a little bit and give the League a smidgen of affection in return. Loyalty and attendance are all the League requires; and in return it will give to the "boys" two hours of carefree camaraderie and fun along with the mental and physical stimulation of competitive bowling.

This year there are several teams that need steady average bowlers due to the forced absence of bowlers through no fault of their own. (As you well know, the physical ravages of Time catch up with us before we are aware of it, and we have to curtail our activities and hoard our strength.) For these and other reasons there are openings on the Washington Hospital Center team, the Garfield team, and the Emergency Hospital team; therefore, any bowler neophyte or "pro"—who would like to bowl on Friday nights at 9 p.m. at the King Pin Alleys, call the new President of the League, Dr. Frank S. Bacon, at National 8-0263 or Woodley 6-1554 and get assigned to a team. Or, phone the new Vice President of the League, Dr. Harold W. Hawfield, at Executive 3-0343 or Overlook 4-5441 for assignment. But *do* phone; that is the important thing!

The teams and their members are listed in alphabetical order:

CASUALTY

Dr. Alfred Dibbs, *Captain*
Dr. Henry H. Canton
Dr. John P. D'Angelo
Mr. Kenneth Clark
Mr. Paul Duffy

CHILDREN'S

Dr. Frank S. Bacon, *Captain*
Dr. Ambrose H. Cook
Dr. Alvin I. Kay
Dr. Israel Kessler
Dr. Thomas J. Pekin
Dr. George A. Resta

COLUMBIA

Dr. J. Earl Kadan, *Captain*
Dr. A. J. B. Connolly
Dr. D. Franklin Hodge
Dr. Eugene J. McDonald
Dr. Clyde P. Reeves
Mr. Irwin T. Sealfon

DOCTORS

Dr. W. Robert Perkins, *Captain*
Dr. Ray N. Brown
Dr. Benjamin Golden
Dr. Allen S. Lloyd
Dr. Sherman A. Thomas
Mr. James Carter, Secretary of the League

EMERGENCY

Dr. Harold H. Hawfield, *Captain*
Dr. Edgar N. Brauner
Dr. Neville K. Connolly
Dr. Otto T. Englehart
Dr. Forrest V. Schumacher

GARFIELD

Dr. Elmer Klein, *Captain*
Dr. William G. Cushard
Dr. Ashby W. Smith
Mr. John E. Grubb

GEORGETOWN

Dr. Roy G. Klepser, *Captain*
Dr. David Feltman
Dr. Gordon R. MacDonald
Dr. Dee R Parkinson
Dr. Lawrence A. Rapee
Dr. Alfred Wilson

GEORGE WASHINGTON

Dr. Blaine H. Eig, *Captain*
Dr. Bernard A. Fitzgerald
Dr. Clifton R. Gruver
Dr. John W. Price
Mr. Frank Baiers

PRINCE GEORGES

Dr. Charles Hageage, *Captain*
Dr. Leonard S. Berman
Dr. William Brainin
Dr. Frederick E. Musser
Mr. T. Kendell Twigg

PROVIDENCE

Dr. Harold Heiges, *Captain*
Dr. Montague A. Cashman
Dr. James W. Choate
Dr. Alan R. Crain
Dr. Robert Levine
Dr. James A. O'Keeffe

SIBLEY #1

Dr. George L. Ball, *Captain*
Dr. Joseph F. Belair
Dr. John F. Finnegan
Dr. Richard J. McNulty
Dr. Francis C. Richardson

SIBLEY #2

Dr. George H. McLain, *Captain*
Dr. J. Phelps Hand
Dr. Sollie Katzman
Dr. Raymond C. Kirchner
Dr. Willis B. Morse

(*Continued on page 586*)

News and Personals

MEETINGS—Past and Future

The Joint Urological Conferences have been scheduled for 1956–57 in the following hospitals:

September 25: Freedmen's
October 30: District of Columbia General
November 27: Georgetown University
January 29: George Washington University
February 26: U.S. Naval Medical Center
March 26: Walter Reed Army
April 30: Veterans Administration (Mt. Alto)
May 28: Freedmen's

The first two lectures in the series of **Monthly Medical Meetings** sponsored by the **Surgeon General of the Army** will be held in the Sternberg Auditorium of Walter Reed Army Medical Center. On October 18, Dr. Frank Glenn, Professor of Surgery at Cornell University Medical College, will speak on "The Surgery of Acquired Heart Disease." The second lecture will be held on November 15, when Dr. Wesley W. Spink, Professor of Medicine at the University of Minnesota School of Medicine, will present "Problems in Clinical Medicine Related to Antibiotic Therapy." The meetings begin at 8 p.m.

The Washington Psychiatric Society held its first fall meeting on September 28 in the Medical Society's auditorium. Dr. Norman Garmezy, Training Specialist in Clinical Psychology, National Institute of Mental Health, spoke on the subject, "Some Recent Studies of Deficit Behavior in Schizophrenia." Later discussion of the topic was led by Dr. David Shakow, Chief of the Laboratory of Psychology, NIH.

GENERAL NEWS

At the meeting of the **Executive Board of the Medical Society of the District of Columbia,** August 27, it was decided to hold the Sixth Midwinter Seminar on February 19, 20 and 21, 1957.

The Board voted to continue the Annual Dinner for Doctors' Office Staffs but in the future that it be self-supporting.

Designated to serve on the Finance Committee for 1956–57 were the following members of the Executive Board: Dr. James W. Watts, *Chairman*; Dr. Preston A. McLendon, and Theodore Wiprud, *Secretary-Treasurer, ex officio.*

Dr. Robert E. duPrey, Chairman of the Section on Ophthalmology, advised the Board that Dr. G. Victor Simpson had been selected by the Section to serve as ophthalmologist to the Commissioners' Traffic Advisory Committee.

Dr. Marvin E. Perkins was appointed by President Caulk, and confirmed by the Board, to serve on the Committee on Mental Health.

Dr. John A. Reisinger, Chairman of the Research and Training Committee of the **Washington Heart Association,** announces that a Fellowship in Clinical Cardiology (postdoctoral) is open to graduates of approved medical schools for training in the cardiovascular field. Applications must be received by November 15. The stipend of $3,600 per annum will be paid monthly for a year beginning July of the following year. Application forms may be secured from the Executive Director of the Washington Heart Association, 1154 19th Street, N.W., Washington 6, D.C.

The National Council on Infant and Child Care, Inc., was recently organized in New York as an independent, nonprofit organization formed for the purpose of disseminating counsel based on available objective information concerning health and medical care of infants and children. In addition to providing information to medical science writers, it will review lay medical articles in advance of publication, when requested, and guide the author or editor toward the presentation of sound material in infant and child care. When deemed desirable, the NCICC will originate articles pertinent to current circumstances.

The NCICC will check and consult on advertising of pharmaceutical and other products offered for use in pediatric care, prior to publication if requested, or after. It has adopted a Code for Advertising with the view, at a future appropriate time, of allowing companies who conform to its Code to so indicate in their promotional material.

Lastly, it will coöperate with and help to establish effective liaison among medical, industrial, educational, and promotional organizations for the improvement of all phases of infant and child care.

Following are the officers of the new organization: Dr. Allan M. Butler, President, is Professor of Pediatrics at Harvard Medical School. The Vice President, Dr. John A. Anderson, holds the same professorial position at the University of Minnesota Medical School in Minneapolis. The Secretary-Treasurer, Dr. Henry L. Barnett, is Associate Professor of Pediatrics at Cornell University Medical College in New York.

The offices of the Council are in the New York Academy of Sciences Building, 2 East 63rd Street, New York 21, N. Y.

The District of Columbia Hospital Association has been organized for the purpose of promoting public health and welfare through the development of increasingly better hospital services and to affiliate itself with the American Hospital Association. The officers are:

Richard M. Loughery, Garfield Memorial Hospital, *President*; William M. Bucher, Washington Hospital Council, *Secretary*; John H. Mullendore, Emergency Hospital, *Treasurer*.

In addition to Garfield and Emergency, the member hospitals include: Children's, Columbia, Episcopal Eye, Ear and Throat, Freedmen's, Georgetown University, George Washington University, Providence, Sibley and the Washington Hospital Center (under construction).

The new national headquarters building of the **American Academy of General Practice,** erected at the corner of Volker and Brookside Boulevards in Kansas City, Mo., was formally opened on September 1. More than 400 physicians, dignitaries, and guests were present to hear the dedicatory address of Dr. Dwight M. Murray, of Napa, Calif., President of the American Medical Association.

Built at a cost of $600,000, the building is finished in brick, Indiana limestone, and Minnesota granite, and has been described as a rare combination of beauty and functional design. It houses the Academy staff and the editorial and business offices of GP, the Academy's official publication. Landscaping plans include a Milnes fountain, courtyard, and patio.

A portrait of the late Sir Alexander Fleming, an honorary member of the Academy, to be painted by a New York artist, will hang in the new building. On display in the conference room is the original culture from which all penicillin is derived.

The Hillandale Nursery School, a nursery school for mildly brain-damaged children of Montgomery County, is being sponsored by the National Council of Jewish Women, Montgomery County Section. Children from 4 to 6 years old are accepted only upon referral of physicians. Classes are held on Monday through Thursday, 1 to 2:30 p.m., at the Hillandale Recreation Center. Further information may be secured by calling Mrs. Leona Conn, Juniper 5-8060.

Mr. Owen Knight, Personnel Director of Montgomery County schools, represents the Montgomery County Board of Education on the Nursery School Advisory Board. Physician members of the latter Board are Drs. Marvin I. Mones, Marvin C. Korengold, and Bennett Olshaker, all members of the D.C. Medical Society.

PERSONALS

Dr. George Maksim was appointed Chairman of the Committee on School Health of the American Academy of Pediatrics at its annual meeting in New York, October 6–11. He has been reappointed liaison representative of the Academy to the National Education Association.

Dr. Ralph G. Beachley, Associate member of the District Medical Society, was recently elected to Ordinary Membership in the British Royal Society of Health. Ordinary Membership is the highest grade of elective membership in the Society.

Dr. Beachley

The British Royal Society of Health was founded in 1876 and is under the patronage of Queen Elizabeth and the presidency of Lord Percy of Newcastle. With a membership of 14,000, "the largest society of its kind in the world," its objective is promotion of the health of the people of the British Empire.

Dr. Beachley, who is Director of Public Health of Arlington County, Va. was recommended to membership in the Society by the Secretary of the American Public Health Association in recognition of his accomplishments in the public health field.

Drs. William P. Herbst, James W. Watts and O. Hugh Fulcher participated in the program of the 21st National Congress of the U. S. Section of the International College of Surgeons, held at the Palmer House in Chicago, September 9–13.

Dr. Herbst read a paper on "Practical Aspects of the Mechanism of Inflammation as Applied in Urology." Drs. Fulcher and Watts took part in a Symposium on Back Ache and Sciatic Nerve Pain Not Caused by Intervertebral Disc Injuries, presented before a joint session of the Sections on Orthopedic and Neurologic Surgery. Dr. Watts also presided at the meeting of the Section on Neurologic Surgery, September 11.

Dr. Charles Stanley White, Sr., was made an Honorary Fellow of the College at the Convocation, September 13. His name was presented to the membership by Dr. Watts.

Drs. Irvin Feldman, James Peter Murphy, and Saul Schwartzbach were elected Qualified Fellows at the same meeting.

Dr. J. Winthrop Peabody, Sr., Chairman of the Council on Postgraduate Medical Education, American College of Chest Physicians, has organized and will direct the Eleventh Annual Postgraduate Course in Diseases of the Chest, in Chicago, October 15–19, at the Knickerbocker Hotel.

In May 1956, Dr. Peabody was reëlected to the Board of Directors of the National Tuberculosis Association. In June, at a meeting of the AMA's Section on Diseases of the Chest, he was reëlected Alternate Delegate to the AMA's House of Delegates.

The Georgetown University Chapter of Alpha Omega Alpha, honorary medical fraternity, recently elected Dr. Peabody to honorary membership.

The staff of Howard University School of Medicine presented a number of papers at the Annual Meeting of the National Medical Association, held at the Hotel New Yorker, in New York, August 13–16. Included were the following papers authored by members of the District Medical Society:

"Diabetes and Its Complications," Drs. Riley F. Thomas and Walter L. Henry, Jr.

"Congenital Heart Disease," Dr. John B. Johnson.

"Surgical Biopsy Significant in Clinical Diagnosis; Pitfalls to Be Watched For," Dr. Jack E. White and Dr. J. Owen Blache, St. Louis.

"The Use of the Fred Thompson Prosthesis for Replacement of Head of Femur," Drs. J. Robert Gladden, Francis L. Smith and James Bass, the latter two, D. C. General Hospital staff members.

"The Modern Management of Acute Upper Gastrointestinal Hemorrhage," Dr. Randolph Kelley Brown.

Dr. Robert S. Jason, Dean of the College of Medicine, chairmanned a Clinicopathologic Conference at the meeting.

Dr. Joseph W. Peabody, Jr. has returned from his second tour of military service and is reassociated with Dr. Edgar W. Davis in the practice of thoracic and cardiovascular surgery at 1150 Connecticut Avenue, N. W.

Dr. Melvin G. Alper addressed the Mecklenburg County Medical Society in Charlotte, N. C., on September 4. His paper was entitled, "Ophthalmoscopic Changes in Arterial Vascular Disease."

Dr. Roland W. Penick writes that he is now practicing pediatrics in Greenville, S. C.

Dr. Francis D. Fowler has enrolled for residency training in orthopedic surgery at Georgetown University Hospital.

Dr. James K. Gordon resigned his Resident-Intern membership in the District Medical Society because he is opening an office in Bedford, Pa.

Correction: In his Annual Report of the Physicians' Services Committee of Medical Service, which appeared in the August issue of the MEDICAL ANNALS, Dr. Edward W. Nicklas, Chairman, expressed his appreciation to a liaison group of three dermatologists who worked with each member of their group presenting claims. One of these was **Dr. Robert Stolar,** whose name was incorrectly mentioned in the article as Dr. Raymond Stoller.

CORRESPONDENCE

CHICAGO, ILL., August 22, 1956

TO MR. WIPRUD:

The American Medical Association has for the past 2 years been coöperating with the Sears-Roebuck Foundation in a program which we hope will supplement all of our placement service efforts in providing improved medical care where there is the greatest need.

The Foundation makes an annual grant of $125,000 which is placed in a revolving fund and made available to physicians desiring to establish practices or to improve existing facilities. The primary objective is to improve medical services and facilities in suburban and rural areas. This grant will be continued for a period of 10 years providing there is an actual need for the program.

A Medical Advisory Board of the Foundation, appointed by the trustees of the AMA, screens all applications for loans available from this fund. These Board members represent various geographical areas and may be called upon for assistance and advice regarding the loan program.

The interest rate ranges from 0 to 6 per cent over a 10-year period depending on the rapidity of repayment. There is no charge for administration of the program as this is met by additional Foundation funds.

To date the Foundation has made 22 loans, affecting 33 physicians, in 13 states, totaling $172,000. Loans have gone to general practitioners, specialists, partnerships, and medical groups. So that applications may be processed efficiently, there are 2 cut-off dates, October 1 and April 1. Applications received prior to October 1 will be decided upon no later than December 15. Applications received between October 1 and April 1 shall be decided upon no later than June 15.

Every placement service receives requests for information concerning areas where there is a need for a physician and also requests from physicians seeking locations. It may be that the Sears Foundation revolving assistance fund can be of value in such cases. I would like to suggest that when you receive inquiries from physicians that you call their attention to the existence of this program. All placement services have been supplied with copies of the Plan of Assistance brochure and application. Why not send each inquiring physician a copy? If you need more such brochures, we shall be glad to supply them to you.

Personally, I would appreciate your coöperation in bringing the Plan of Assistance program to the attention of physicians who contact the placement service. I am sure this program can be of service to all of us in our efforts to provide improved medical care in those areas of need in each state.

Sincerely yours,
WILLARD A. WRIGHT, M.D.
Chairman, Committee on Medical and Related Facilities,
American Medical Association

WASHINGTON, D.C., August 30, 1956

TO THE EDITOR:

There seems to be a growing and unfortunate tendency among the physicians elected to high offices in the AMA and other medical societies to express or infer political opinions through the medium of medical journals or in official speeches and interviews. These statements are made as officials of medical organizations and not as individuals. I was saddened to see my friend and our honored President Ralph Caulk fall into this error recently in his communication to the membership on the President's Page in the August issue of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA.

President Caulk said:

"Nearly a quarter of a century has passed since the Southern Medical Association last met in Washington. To be exact, it was in 1932, the year that marked the beginning of the Great Depression, as well as the New Deal. The Association is paying a return visit to the Nation's Capital under far different political and economic conditions."

As Al Smith said, "Let's look at the record." I would like to call Dr. Caulk's attention to a few facts.

1. The Great Depression began in October, 1929 and not 1932, and followed the stock market crash of October

of that year. This was seven months after Hoover took office and after something over seven years of Republican rule. This was the year that the Secretary of the Interior Albert Fall was convicted and imprisoned for taking a $100,000 bribe from Mr. Doheny.

2. F.D.R. was inaugurated in 1933, not in 1932. There are indeed "far different political and economic conditions" at the present time. Two days after his inauguration he had to declare a bank holiday to prevent complete economic destruction of the country.

This is all just to get the record straight and draw attention to a somewhat pernicious tendency for elected medical personages to interject political inferences from exalted podiums to which they have been elevated by election—by Democrats, Republicans and Independents.

Sincerely yours,
WORTH B. DANIELS, M.D.

WASHINGTON, D.C., September 7, 1956

TO THE EDITOR:

The letter of Dr. Worth B. Daniels relative to my comments on the President's Page of the August issue of the MEDICAL ANNALS has been brought to my attention.

I think it is indeed a healthy medical atmosphere in which we live, that a physician takes "time out" to express his exceptions to editorial comments in the medical journals.

It is my understanding that the President's Page in the ANNALS is designed for an expression of the President's views, and the comments published over his signature are "open-sesame" for criticism such as Dr. Daniels has expressed. I can assure Dr. Daniels that there were no political connotations intended in the portion to which he takes exception. I was merely trying to "pinpoint" an era, and to me the time in question was just that—a period in which I was a student at Medical School, not politically conscious, struggling with the economic and academic aspects of obtaining an education.

I thought I had done it quite well.

Sincerely yours,
RALPH M. CAULK, M.D.
President, The Medical Society of the District of Columbia

BOOK REVIEWS

Your Blood Pressure and How to Live With It. WILLIAM A. BRAMS, M.D. Illustrations by Hertha Furth. Price, $2.95. Pp. 160. Philadelphia: Lippincott, 1956.

This small book for the lay hypertensive discusses the symptoms of high and low blood pressure and the associated physical findings. The causes of hypertension are briefly covered and the patient is advised how he can help himself. The doctor's place in treatment is seen throughout the book, yet in no place is any specific therapy advised. Weight reduction and stress reduction are nicely presented. There are appendices presenting a normal weight table, 2 reducing diets, and a list of agencies of rehabilitation and vocational placement. Reading this book would be helpful to the hypertensive patient. This in turn would help the physician treat the patient and his disease.

ROBERT L. GUILLAUDEU, M.D.

Diseases of the Chest. H. CORWIN HINSHAW, M.D., Ph.D., Clinical Professor of Medicine, Stanford University School of Medicine, AND L. HENRY GARLAND, M.B., B.Ch., Clinical Professor of Radiology, Stanford University School of Medicine. Price, $15.00. Pp. 727, with 634 illustrations on 288 figures. Philadelphia: Saunders, 1956.

This book needed to be written. It is an excellent textbook for students, or reference book for practicing physicians. The authors' authoritative knowledge and flair for communication are evident throughout.

The earlier chapters in "Diseases of the Chest" deal with diagnostic procedures and with newer thoughts about anatomy and physiology. From there onward the book follows the familiar pattern of division by disease entities. References are grouped at the ends of chapters and are not so numerous as to be cumbersome.

Typography and format are in the best Saunders tradition. The illustrations—chiefly chest roentgenograms—are superb reproductions. As a matter of fact, if the purchaser of this book did nothing more than study the pictures, he would get his money's worth.

HUGH H. HUSSEY, M.D.

Textbook of Urology. VICTOR F. MARSHALL, M.D., F.A.C.S., Associate Professor of Clinical Surgery (Urology), Cornell University Medical College; Attending Surgeon-in-Charge, Urology, James Buchanan Brady Foundation of the New York Hospital; and Associate Attending Urologist, The Memorial Center for Cancer and Allied Diseases, New York City. Price, $5.50. Pp. 268. New York: Hoeber, 1956.

Dr. Marshall has built well his plan for the management of the urologic patient and in infinite detail, emphasizing again and again how necessary it is for the physician to be systematic in history-taking and thorough in the physical examination and the ordinary urinalysis. At least these steps should be completed before cystoscopic study, and before diagnosis is attempted.

In one volume there is a great deal of urologic information, whole chapters being devoted to such disorders as hematuria, obstruction and infection, carcinoma of the prostate, etc., with less space being devoted to therapy and with a noticeable absence of any descriptive anatomy and embryology.

Although the book is designed for the medical student and non-specializing physician, the reviewer found it attractive continuously. The current bibliography appended suggests further reading on urologic subjects.

Few such books can be read without some disagreement, but the liberal tone and sensible therapy command respect and provoke my continued approbation and recommendation to those interested in the field of urology. The author's choice of words is excellent, generally plain and down-to-earth. In such conditions as prostatism and neurogenic bladder, he displays a clear understanding and recommends conservative management.

Lyle M. Mason, M.D.

A Textbook of Clinical Patholgy, 5th ed. Edited by Seward E. Miller, M. D., Medical Director, United States Public Health Service; Chief, Division of Special Health Services, Washington, D.C. Price, $11.00. Pp. 1208, illustrated. Baltimore: Williams & Wilkins, 1955.

The authors have proposed to write a textbook in clinical use of the laboratory for medical student, intern, resident physician, clinical pathologist, and teacher of medicine. With such a broad aim, they have succeeded, perhaps, as much as is possible. No one could satisfy all, or even perhaps most, of the needs of that large group.

The text is probably too elaborate for the student and intern, fairly satisfactory for the resident, and not complete enough for the last two.

Much of the field of clinical pathology is controversial, especially concerning the methods of choice for determining laboratory results. This is perhaps most apparent in the field of coagulation. A major limitation of this work's usefulness as a reference is the use of the "procedure of choice" by the authors, even though it may be far from generally accepted. For example, only one technic of demonstrating the LE phenomenon is discussed. The Rees-Ecker platelet count technic is described, and other technics, like the phase contrast (probably more accurate), are omitted. EDTA (versene) is not indicated as an anticoagulant of importance. The authors dismiss the partitioned bilirubin and the creatinine clearance test as of little value.

In general, however, the authors are to be commended for their work. They are to be congratulated for the use of the standard nomenclature of blood cells recommended by the Committee for the Clarification of Nomenclature of Cells and Diseases of Blood and Blood Forming Organs sponsored by the American Society of Clinical Pathologists and reported in 1949 and 1950. Most of the chapters are up-to-date and fairly clearly set forth. The chapters on hematology are quite good, accurate, and current, and are considered by this reviewer to be the best parts of the book, with some of the rest suffering by comparison.

The book can be recommended for students and house officers, and as a refresher for the older clinicians, although the last may want original articles or a more encyclopedic work. The ideal current book from which to teach clinical pathology to medical students is not available.

Paul R. McCurdy, M.D.

Pathologic Physiology—Mechanisms of Disease, 2nd ed. Edited by William A. Sodeman, M. D., F.A.C.P., Professor of Medicine and Chairman of the Department of Medicine, School of Medicine, University of Missouri, Columbia, Missouri. Twenty-nine contributors. Price, $13.00. Pp. 963, with 173 illustrations. Philadelphia: Saunders, 1956.

The purpose of this book is to analyze symptoms and signs and the mechanisms of their development. It is not intended to take the place of standard texts on physiology or textbooks of medicine. It bridges the gap between them by presenting a clinical picture of disease seen as physiologic dysfunction and aims to promote understanding of how and why symptoms appear in order that the student or physician may have a reasonable explanation for the findings he elicits. The 31 individual monographs are exceedingly well done by authorities on the subjects. This book is a "must" for every physician's library.

W. M. Y.

ROBERT W. BAKER, M.D.
(1863–1956)

Dr. Robert W. Baker, retired Washington physician, a Life member, and, before his death, second oldest member of the District of Columbia Medical Society, died August 20, 1956, at a nursing home in Villa Nova, Pa. He had been visiting his son, Commander Robert Scott Baker, U.S.N. (ret.), in nearby Wynnewood, Pa.

Dr. Baker, the son of Henry S. and Aletha Hunt Baker, was born in Winchester, Va., July 5, 1863. He attended the Shenandoah Valley Academy in Winchester, and graduated in medicine from the University of Virginia in 1887. Following his internship at the Charity Hospital in New York, 1887 to 1889, he went abroad for postgraduate study in Vienna.

Since opening his offices in the District of Columbia in 1891, Dr. Baker continued in practice until he retired 5 years ago, except for a brief period when he served in the Medical Corps of the U.S. Army during the Spanish-American War of 1898. His home and offices were at 1827 Jefferson Place, N.W.

Dr. Baker was elected to membership in the Medical Association of the District of Columbia in 1891, and became a Life member of the District Medical Society in 1932. He was a member of the American Medical Association, the Clinico-Pathological Society, and the Cosmos Club.

His wife, Mrs. Abby Scott Baker, preceded him in death. Besides Commander Baker, he is survived by two other sons, Henry Scott Baker, of Baltimore, and James Scott Baker, of Inglewood, New Jersey; and a sister, Mrs. Robert T. Barton, of Winchester, Va.

Dr. Baker observed his ninetieth birthday in 1953 in Baltimore, where his sons and their families gathered to celebrate the event.

JAMES C. KIMBROUGH, M.D., F.A.C.S.

(1887–1956)

Colonel James C. Kimbrough, M.C., U.S.A. (ret.), died, August 19, 1956, at Walter Reed Army Hospital, where he had served for the past 10 years. He lived at 9320 Harvey Road, Silver Spring, Md.

From 1946 to 1953, Colonel Kimbrough was Chief of the Urology Service at Walter Reed Army Hospital. In August 1953, upon retiring from the Army after 36 years of service, he was designated by an Act of Congress as consultant in urology to Walter Reed Army Medical Center.

Born in Madisonville, Tennessee, in 1887, Colonel Kimbrough was graduated from Hiwassa College there, and from Vanderbilt University School of Medicine in 1916. The next year he began his long career as a medical officer in the United States Army.

Since 1921 he served almost exclusively as chief urologist at various Army hospitals, including a total of four duty tours at Walter Reed. He was also Chief of the Professional Services Division in the Office of the Chief Surgeon, European Theater of Operations, from 1942 to 1945. He was one of the first Army medical officers to be awarded the specialty "A" rating by the Surgeon General of the Army indicating outstanding accomplishment in his profession.

In 1955 he was elected President of the American Urological Association's Mid-Atlantic Section, the first time in the Association's history that a former Army officer held that position. Three years earlier the Association awarded him a plaque for his "contribution to the advancement of science and practice of urology."

Colonel Kimbrough was a diplomate of the American Board of Urology, a Fellow of the American College of Surgeons, and a member of the American Medical Association and the Washington Urological Society. He was an honorary member of the Royal College of Surgeons and the Royal Society of Medicine, both of London, and the Academy of Surgeons, Paris. He received meritorious awards for his services in both World War I and World War II. Following World War I he was cited by General of the Armies John J. Pershing.

His wife, Mrs. Pauline Kimbrough, and a daughter, Miss Jane Kimbrough, both of the home address, survive him. He also leaves a brother, Dr. R. C. Kimbrough, of Madisonville, Tenn., and two sisters, Mrs. P. S. Taylor, of Etowah, Tenn., and Mrs. Frank N. Bratton, of Athens, Tenn.

Orinase in Diabetes—Sugar. Levitsky and Bergemann

(Continued from page 533)

BIBLIOGRAPHY

1. Franke, H., and Fuchs, J.: New anti-diabetes principle; results of clinical research. Deutsche med. Wchnschr., 1955, **80**, 1449.
2. Achelis, J. D., and Hardebeck, K.: New blood-sugar reducing substance; preliminary data. Ibid., 1955, **80**, 1452.
3. Ridolfo, A. S., and Kirtley, W. R.: Clinical experiences with Carbutamide, an orally given hypoglycemic agent. J.A.M.A., 1956, **160**, 1285.
4. Mirsky, I. A., Perisutti, G., and Diengott, D.: Inhibition of insulinase by hypoglycemic sulfonamides. Metabolism, 1956, **5**, 156.
5. Mirsky, I. A., Diengott, D., and Dolger, H.: Hypoglycemic action of sulfonylureas in patients with diabetes mellitus. Science, 1956, **123**, 583.
6. Miller, W. L., Jr., and Dulin, W. E.: Orinase, a new oral hypoglycemic compound. Ibid., 1956, **123**, 584.
7. Kinsell, L. W., Brown, F. R., Jr., Friskey, R. W., and Michaels, G. D.: Insulin-sparing sulfonamides. J. Clin. Endocrinol., 1956, **16**, 821.
8. Nelson, N.: Photometric adaptation of Somogyi method for determination of glucose. J. Biol. Chem., 1944, **153**, 375.

Meprobamate—Ruchwarger

(*Continued from page 556*)

Premature reduction of the dose will almost always result in relapse and is frightening to the patient. Since toxic effects did not accompany the use of the drug, I consider it safe to continue at the known effective dose for a period adequate to enable the patient, with psychotherapy if possible, to work out a more satisfactory emotional adjustment.

SUMMARY

Meprobamate in doses of 2 tablets 5 times a day proved an effective treatment for neurotic depression. Best results were achieved in acute cases associated with anxiety and tension. However, even severe and suicidal patients proved responsive, including several who would have required hospitalization or electroshock treatment without the drug. Nearly all patients slept better and became more coöperative in psychotherapy. No toxic effects or side-reactions were observed with meprobamate other than transient drowsiness in a few patients. The drug did not increase depression. It proved important to avoid premature reduction of the effective dose in order to prevent recurrence of symptoms.

BIBLIOGRAPHY

1. Selling, L. S.: Clinical study of new tranquilizing drug; use of Miltown (2-methyl-2-n-propyl-1,3-propanediol dicarbamate). J.A.M.A., 1955, **157**, 1594.
2. Selling, L. S.: Clinical study of Miltown, new tranquilizing agent. J. Clin. Exp. Psychopath., 1956, **17**, 7.
3. Berger, F. M.: Pharmacological properties of 2-methyl-2-n-propyl-1,3-propanediol dicarbamate (Miltown), new interneuronal blocking agent. J. Pharmacol. & Exper. Therap., 1954, **112**, 413.
4. Borrus, J. C.: Study of effect of Miltown (2-methyl-2-n-propyl-1,3-propanediol dicarbamate) on psychiatric states. J.A.M.A., 1955, **157**, 1596.
5. Lemere, F.: New tranquilizing drugs. Northwest Med., 1955, **54**, 1098.

First Impressions—Observer

(*Continued from page 566*

the stand taken by our parent organization is sound. Let us devote ourselves with more zeal to pursuing a course along constructive lines. A 'holier-than-thou' attitude does not become us. We are human, and we make mistakes. The important thing is that we make a serious effort to be right most of the time."

Dr. Blank admitted that there was much truth in what had been said. The burn had subsided, but perhaps only until the next "bad" story.

T. W.

On the Lighter Side—Kadan

(*Continued from page 578*)

SUBURBAN

Dr. Andrew J. Betz, *Captain*
Dr. P. Paul Andrews
Dr. Richard J. Meyer
Dr. Millard F. Ottman
Dr. S. Paul Porton

WASHINGTON HOSPITAL CENTER

Dr. Maurice Van Kinsbergen, *Captain*
Dr. Aaron Gerber
Dr. Ross M. Lehman, Jr.
Dr. F. D. Timmermans

The doctors who have indicated a desire to substitute as the occasion arises are as follows: Drs. William J. Evans, William K. Billingsley, Hamilton P. Dorman, Parker S. Dorman, Duane C. Richtmeyer, Victor H. Esch, G. Roland Gable, John W. Perkins, Ralph W. Barnhard, Howard E. Newman, James B. Faris, John A. Kennedy, Ray Feldman and Don R. Sickler.

J. Earl Kadan, M.D.

Dependents Medical Care Act—Caulk

(*Continued from page 557*)

> out. For if the referring doctor is adequately paid for his service—and most fee schedules do make fair provision for him a major reason for fee-splitting vanishes."

Whether or not you agree with the above is immaterial. It does matter, however, that physicians be fee-conscious in view of the great expansion of medical care plans in private practice, industry, and Government.

Ralph M. Caulk, M.D.

MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP

WASHINGTON, D. C.

1956–1957

SOCIETY	PRESIDENT	SECRETARY	NO. MEETINGS PER YEAR	DATE OF MEETINGS	PLACE OF MEETING
American Academy of General Practice, D. C. Chapter	F. Pellegrini	M. van Kinsbergen	4	4th Tuesday, Oct., Dec., Feb., Apr.	MSDC Building
American College of Chest Physicians, Potomac Chapter	E. G. Beacham, Baltimore	J. W. Peabody, Jr.	1	Nov. 11-12	Shoreham Hotel
American Federation for Clinical Research, D. C. Chapter	W. H. Meroney	A. E. Parrish	4	Oct. 8, Dec. 10, Feb. 11, April 9	MSDC Building
American Medical Writers' Association, Mid-Atlantic Chapter	I. P. Frohman	Mrs. F. A. Cooksley	2	On call	National Press Club
Baltimore-Washington Dermatological	E. Bereston, Baltimore	A. H. Gould	6–8	3rd Thursday	Alternating Cities
Clinical Club of Washington	B. G. Brown	R. R. Montgomery	7	1st Tuesday	Kennedy-Warren
Clinical Society of Diabetes Association	A. G. Saidman	A. E. Parrish	4	Sept., Dec., Feb., May	MSDC Building
Clinico-Pathological	C. D. Briggs	A. E. Walker, Jr.	7	3rd Tuesday	Homes
Diabetes Association	J. M. Moss	L. K. Alpert	4	On call	MSDC Building
Georgetown Clinical	R. A. Osbourn	P. F. Jaquet	8	3rd Tuesday	Hotel 2400
Georgetown University Medical Alumni Club	A. Kramm	W. D. Dolan		On call	
George Washington University	R. H. Fischer	J. R. Creer	2	Nov. 12; Feb. 23	Sheraton-Park Hotel; Shoreham Hotel
Hippocrates-Galen	L. G. Lewis	C. Berg	5	1st Thursday, Nov., Jan., Feb., Mar., Apr.	Kennedy-Warren
International Medical Club	H. L. Darner	A. A. Morris, Jr.	4-6	On call	Mayflower Hotel
Jacobi	M. J. Romansky	M. O. Goodman	6	3rd Monday	Willard Hotel
Jefferson Medical College Alumni Association	F. W. Konzelmann	J. T. Rawlins	2	Spring and Fall	Army-Navy Club
Kober	J. R. Ewan	L. C. Moss	8	3rd Monday	Army-Navy Club
Louis Mackall	N. Stow	J. W. Latimer, Jr.	7	3rd Thursday	Kennedy-Warren
Medical Arts	T. Winship	G. K. Palmes	7	2nd Thursday	Kennedy Warren
Metropolitan Health Officers' Association	D. Seckinger	R. G. Beachley	4	1st Wednesday, Oct., Jan., Apr., July	Washington Golf and Country Club
Osler	H. A. Grennan	F. V. Schumacher	8	3rd Monday	Homes
Pan American Society, D. C. Branch	W. F. O'Donnell	D. F. Lynch	4	Oct., Dec., Feb., Apr.	Mayflower Hotel and Pan American Union
Physician-Veterans of World War II	J. O. Nestor	R. A. Osbourn	1	December	MSDC Building
Providence Hospital Doctors Alumni Association	G. D. Gartland	V. J. DiFrancesco	10	3rd Sunday	Providence Hospital
Rheumatism	J. Ney	M. H. Stolar	5	On call	
St. Elizabeths Hospital	J. Abrahams	J. P. D'Angelo	3	Oct., Jan., Apr.	
Society of Anesthesiologists	W. H. Devlin	A. S. Russell, Jr.	4	Oct. 22, Dec. 3, Feb. 18, May 13	MSDC Building

NOTE: Most of these societies begin their meetings in October and continue through April or May.

MEDICIAL SOCIETIES WITH LIMITED MEMBERSHIP—*Continued*

SOCIETY	PRESIDENT	SECRETARY	NO. MEETINGS PER YEAR	DATE OF MEETINGS	PLACE OF MEETING
Trudeau Society	D. L. Finucane	M. Gusack		On call	
Washington Academy of Medicine	W. Davis	E. C. Albritton	3	On call	Roger-Smith Hotel
Washington Academy of Neurosurgery	W. T. Spence	J. M. Williams	4	On call	Army-Navy Club
Washington Academy of Surgery	R. E. Moran	J. C. Murphy	4	2nd Monday, Oct., Dec., Feb., Apr.	Kennedy-Warren
Washington Gynecological	J. K. Cromer	R. B. Nelson, Jr.	5	Last Saturday, Oct., Nov., Jan., Mar., May	Willard Hotel
Washington Heart Association, Scientific Council	T. E. Mattingly	H. D. Ecker		On call	
Washington Homeopathic	W. P. Baker	H. H. Custis, Jr.	4	Oct., Jan., Mar., May	University and Columbia Country Clubs
Washington Medical and Surgical	J. P. Hand	H. M. Hobart	7	4th Monday	Hotel 2400
Washington Orthopedic Club	H. L. Feffer	M. M. Gibson	7	On call	MSDC Building
Washington Psychiatric	W. Overholser	M. L. Adland	8	Last Friday	MSDC Building
Washington Psychoanalytic	D. Noble	S. L. Olinick	8	2nd Friday	1720 M St., N.W.
Washington Society of Pathologists	J. S. Howe	T. B. Dunn	8	Oct. 1, Nov. 6, Dec. 5, Jan. 3, Feb. 4, Mar. 5, Apr. 3, May 4	Armed Forces Institute of Pathology
Washington Urological	E. E. Ferguson	G. R. Gable	6	Every 6 weeks	Doctors Hospital
Women's Medical	C. M. Gay	V. Jaffee	8	1st Tuesday	MSDC Building

SECTIONS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

1956–1957

SECTION	CHAIRMAN	SECRETARY	NO. MEETINGS PER YEAR	DATE OF MEETINGS	PLACE OF MEETINGS
Anesthesiology	W. H. Devlin	A. S. Russell, Jr.	4	Oct. 22, Dec. 3, Feb. 18, May 13	MSDC Building
Dermatology and Syphilology	N. M. Kanof	P. N. Horvath	2	Spring and Fall	
Gastroenterology	E. A. Gould	W. H. Ferguson	4	1st Monday, Oct., Dec., Feb., Apr.	Homes
General Practice	W. R. Perkins, Jr.	W. B. Morse	4	4th Tuesday, Oct., Jan., Mar., May	MSDC Building
Internal Medicine and Allied Subspecialties	H. D. Ecker	W. K. Billingsley, Jr.		On call	MSDC Building
Neurology and Psychiatry	S. Rollins	D. S. O'Doherty	6	1st Thursday, E.O.M.	MSDC Building
Ophthalmology	R. E. duPrey	M. M. Parks	4	Oct., Dec., Feb., Apr.	Kennedy-Warren
Otolaryngology	R. S. Page, Jr.	E. M. O'Brien	4	2nd Tuesday, Sept., Nov., Jan., Mar.	Army-Navy Club
Pathology and Laboratory Medicine	D. L. Weiss	G. H. Guin	10	4th Friday	Homes
Pediatrics	G. Maksim	J. E. Cassidy		On call	
Radiology	D. H. Rosenfeld	M. O. Goodman	4	3rd Wednesday, Oct., Jan., Mar., May	MSDC Building

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *November*, 1956 NUMBER 11

LEFT HEART CATHETERIZATION*

OWEN GWATHMEY, M.D.
JOHN M. KESHISHIAN, M.D.
GEORGE A. KELSER, JR., M.D.
BRIAN BLADES, M.D.
Washington

THE NECESSITY for a more accurate method for evaluation of the degree of severity and type of disease of the aortic and mitral valves has long been appreciated by both the cardiologist and surgeon.[1] Cardiac catheterization for the diagnosis of tricuspid and pulmonary valve diseases and other abnormalities pertaining to the right heart is an established laboratory procedure.[2]

The selection of candidates for mitral and aortic valvular surgery is often perplexing. The clinical features and routine laboratory examinations usually provide sufficient basis for recommending commissurotomy in the classic case of mitral stenosis. The typical clinical picture of pronounced mitral regurgitation is easily diagnosed. However, patients with mitral stenosis and insufficiency often create a problem as to which is the predominant lesion. Commissurotomy for mitral stenosis is a time-proven surgical procedure, but the surgical treatment of mitral insufficiency must still be considered in the investigative phase. It is a well-known fact that patients with predominating mitral insufficiency do not usually do well following commissurotomy; and if upon exploration of the valve, no surgical relief can be offered, the outcome may be catastrophic. Patients with remediable lesions usually survive more formidable procedures.

Aortic stenosis and insufficiency may likewise be confused. The severity of aortic stenosis should be determined before surgical exploration in order to estimate whether there will be hemodynamic and symptomatic improvement. The technical approach to the treatment of aortic stenosis is entirely different from that of aortic insufficiency. Accurate diagnosis is essential in determining the predominant lesion, since the surgeon must be prepared for either fracture of the stenotic valve or insertion of the Hufnagel valve in the descending aorta for insufficiency.

In operative procedures for diseased valves it is important to know what valve or valves are involved, which lesions are important and amenable to surgery, which lesion can be left alone, and which should be explored first. It is also important to determine whether the cardiac symptoms are due to myocardial failure or to idiopathic pulmonary hypertension rather than a "silent" mitral stenosis.[2]

---

* From the Departments of Surgery and Medicine, George Washington University School of Medicine.

Until recently there has been no satisfactory method of diagnosing valvular disease of the left heart. Facquet and associates[3] in 1952 developed a method for puncture of the left atrium to obtain recordings of the pressure by the transbronchial route. This method has been popularized by Allison and Linden[4] in England and by Morrow[5] and others in this country. The posterior percutaneous puncture technic was developed by Björk[6] in 1953 and has been used extensively by Fisher,[7] Blakemore,[8] and others with certain modifications.

More recently Björk,[9] Morrow,[5] and Fisher[10] have extended the technic of left heart puncture to a left heart catheterization procedure by passing a small plastic catheter through the needle into the left atrium, thence into the left ventricle, and finally into the aorta. Pressure readings in both chambers and pressure gradients across both the aortic and mitral valves can be recorded and are a valuable tool in the diagnosis and ultimate treatment. The method can be further used to measure cardiac output by the dye injection technic.[11] Angiocardiograms may also be made at the same time.

Recently we have been attempting to answer these questions using the posterior percutaneous transthoracic technic of Fisher.[7] The advantages of this method are: (1) The patient is relatively more comfortable and, therefore, (2) theoretically, more valid pressure measurements can be obtained; (3) the approach is through a sterile field; (4) a comparatively wide bore needle can be used; (5) multiple needles can be inserted into the atria simultaneously; (6) the short distance between the pressure transducer and patient leads to more satisfactory pressure measurements; and (7) this may be done in the presence of a small left atrium.[12]

The prime indication for selection of patients for left heart catheterization is the presence of valvular heart disease which cannot be diagnosed accurately by clinical and established laboratory methods. This is not a routine procedure and should be utilized only in patients with potentially remediable lesions. It has also been done in patients with constrictive pericarditis and congenital heart disease.

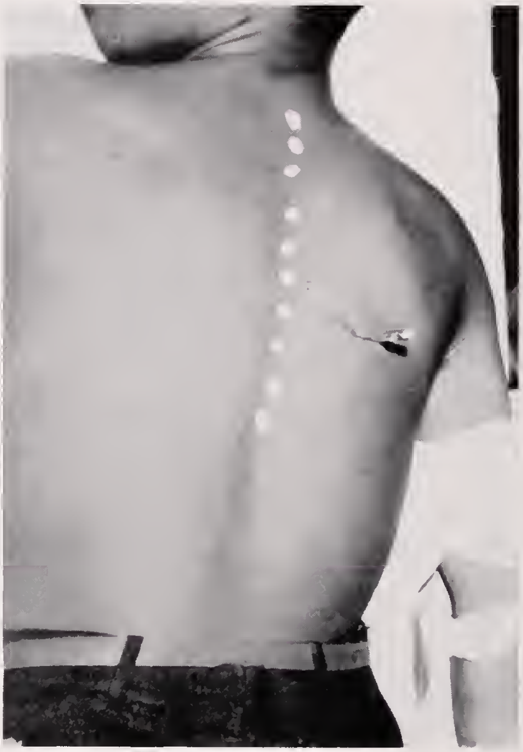


FIG. 1. Needle inserted into left atrium.

PROCEDURE

The patient is given 100 to 200 milligrams of Seconal or Nembutal approximately 1 hour prior to the study. The patient is placed on the fluoroscopy table in the supine position. A Cournand needle is inserted into the brachial artery, or a catheter is placed in the descending thoracic aorta via a femoral artery. The patient is then placed in the prone position and fluoroscoped to check the position of structural landmarks. The left atrium is observed, and a mark is made on

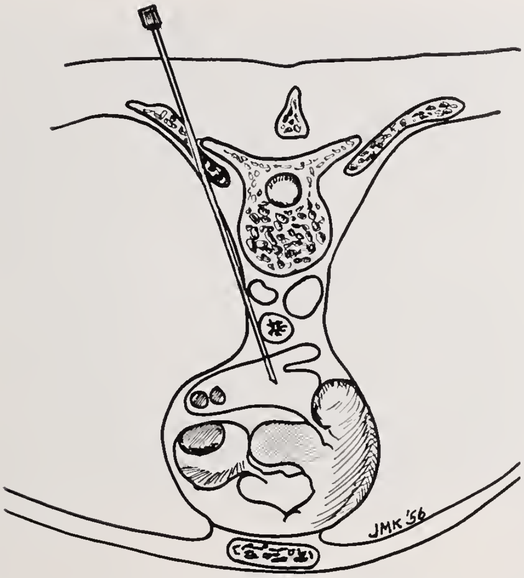


FIG. 2. Saggital section of human body showing needle in left atrium and its relationship to the mediastinal structures.

the skin in the proper interspace in relation to the atrium. A number 18-guage, styleted, thin-wall needle is introduced by a right paravertebral approach, usually through the eighth or ninth interspace (figure 1). It is guided anteriorly and medially toward the midline of the body to pass along the lateral surface of the vertebral body toward the left atrium (figure 2). As soon as the needle is in the atrium (figure 3) a plastic catheter is inserted through the needle. It is connected to the pressure transducer. At the same time the needle in the brachial artery or the catheter in the thoracic aorta is connected to another pressure transducer. Pressures are recorded in the left atrium and left ventricle. Simultaneous left ventricular and central aortic pressures are recorded to obtain the gradient across the aortic valve.

The complications of this procedure are usually not alarming and can be handled with ease. Hemothorax, pneumothorax, hemopericardium, mediastinal hematoma, hemoptysis, and pleuritic pain have been reported.[10] There have been only 2 deaths recorded in over 400 cases. One fatality was due to puncture of an aortic aneurysm[13] and the other to an unrecognized cardiac tamponade.[14]

If the needle is passed into the aorta or pulmonary vein, there are usually no sequelae. At times the needle may be accidentally passed into the left ventricle; and if one desires, pressure recordings may be made there. If the needle is inadvertently passed into the right atrium, right heart catheterization may be done if desired, or if indicated the needle may be inserted into the right atrium for pressure studies of the right heart.[14]

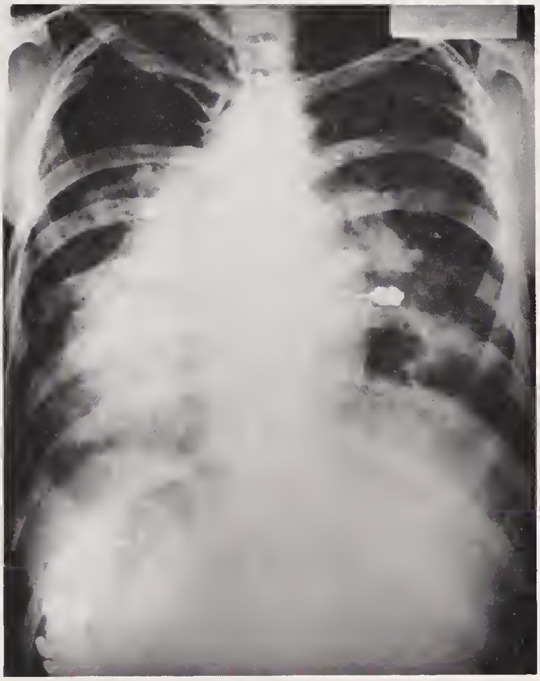


FIG. 3. Needle in left atrium. Note calcified mitral valve.

All patients are kept in the hospital for 24 to 48 hours. A roentgenogram is made immediately following completion of the procedure, 4 hours later, and again the next day.

The accompanying table (table 1) shows the results in the 10 patients studied.

In the series reported here, none of the abovementioned complications was observed. However, patient no. 3 developed hemiplegia 4 hours after completion of the left heart catheterization.

This patient had signs indicative of diffuse cerebrovascular disease prior to the catheter study. Roentgenographic evidence of a giant left atrium with calcification existed for 4 years. The patient died 14 days later. Autopsy was not granted.

TABLE 1

Results in Cases Studied

Case	Age	Sex	Rhythm	Clinical Diagnosis	Catheterization Diagnosis	Surgical Diagnosis	Complications	Remarks
No. 1 R. R.	42	male	N.	A.S.	A.S. mild	—	None	Observation
No. 2 G. M.	32	male	A.F.	M.S. or M.I.	M.S.	—	Died 6 weeks later	Autopsy—pure M.S.; see text
No. 3 J. G.	50	male	A.F.	M.S.	M.I.	—	Died 2 weeks later	No autopsy; see text
No. 4 C. B.	33	male	A.F.	M.S.	M.S.	M.S.	None	See text
No. 5 J. N.	35	male	N.	M.S.	M.S.	M.S.	None	See text
No. 6 N. F.	33	male	A.F.	M.S.	M.S.	M.S.	None	See text
No. 7 M. Q.	40	female	A.F.	A.S., M.S.	M.I. predominant	—	None	
No. 8 A. W.	46	male	A.F.	M.S., T.S.	M.S.	—	None	
No. 9 S. K.	25	male	N.	A.I., M.S.	A.I.	A.I.	None	See text
No. 10 C. C.	61	female	A.F.	M.S., M.I.	M.I. predominant, M.S. minimal	—	None	See text

N.—normal sinus rhythm; A.F.—auricular fibrillation; A.S.—aortic stenosis; M.S.—mitral stenosis; M.I.—mitral insufficiency; T.S.—tricuspid stenosis; A.I.—aortic insufficiency.

In cases 5 and 6 the diagnosis of pure mitral stenosis was confirmed at operation. Adequate finger fracture was performed in each.

Case no. 4 was that of a 33-year-old white man with a classical history of rheumatic heart disease with mitral stenosis but without the classical murmur. Left heart catheterization showed the typical pressure readings of pure mitral stenosis. The diagnosis was confirmed by exploration, and the mitral valve was finger fractured. The patient made an uneventful recovery.

Case no. 2 was that of a 32-year-old white man with a history of rheumatic heart disease with mitral stenosis. Mitral commissurotomy had been performed in February 1954 elsewhere. The mitral valve was reported to be fractured during the operative procedure to the width of 2 fingerbreadths. This was confirmed by 2 surgeons. Postoperatively the patient was employed as a salesman and was relatively asymptomatic until approximately 2 weeks before admission in November 1955. He had developed hemoptysis and epistaxis which required multiple transfusions. Pulmonary hypertension secondary to recurrent stenosis of the mitral valve or severe mitral regurgitation was suspected. He was treated with digitalis and diuretics. In spite of all therapy he continued to cough blood, and on the fourth hospital day more severely. A bronchoscopy was performed to rule out bronchial disease. Profuse bleeding was noted coming from all bronchial orifices. At the completion of the procedure active bleeding stopped. His recovery was slow but progressive.

One month later a left heart catheterization was performed which confirmed the presence of

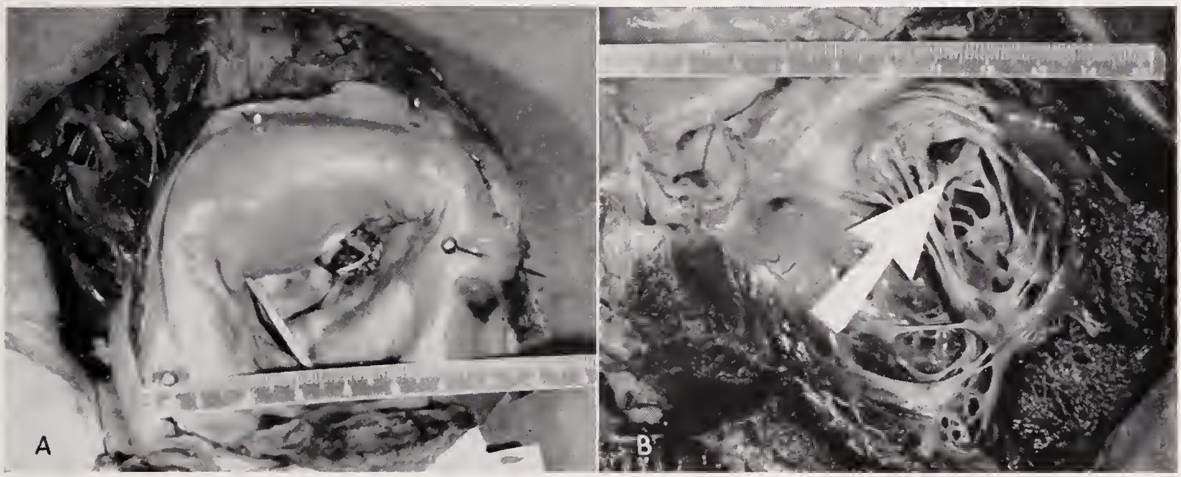


Fig. 4. Case no. 2: (A) Severe mitral stenosis. (B) View of mitral orifice from left ventricular cavity.

mitral stenosis. The patient refused another operation and was discharged. Six weeks later he again developed minimal signs of pulmonary congestion and while visiting his physician for a checkup developed acute cardiac decompensation and died in the office. Autopsy showed a tight mitral stenosis (figures 4-A and 4-B).

Case no. 9 was that of a 25-year-old white man who was referred here for evaluation of aortic valvular disease. Although clinically he was relatively asymptomatic, the physical signs of severe aortic regurgitation were unmistakable. Mitral valve involvement could not definitely be ascertained. Left heart catheterization studies revealed no mitral valvular lesion, and this was confirmed at exploration elsewhere.

Case no. 10 was that of a 61-year-old white woman who had been studied elsewhere for rheumatic heart disease with mitral stenosis. Mitral commissurotomy had been recommended. Left heart catheterization indicated severe mitral regurgitation with minimal stenosis.

Summary

Ten cases of percutaneous transthoracic catheterization are reported. In 5 of these the lesions were confirmed either at surgery or at autopsy. No complications were directly attributed to the procedure. This is a simple and satisfactory method for accurate determination of pressures in the left side of the heart.

BIBLIOGRAPHY

1. Burchell, H. B.: Proc. Staff Meet. Mayo Clin., 1956, **31,** 105.
2. Taussig, H. B.: Congenital Malformations of the Heart. Commonwealth Fund: London: Oxford, 1947.
3. Facquet, J., Lemoine, J. M., Alhomme, P., and Lefebvre, J.: Arch. mal. coeur., 1952, **45,** 741.
4. Allison, P. R., and Linden, R. J.: Circulation, 1953, **7,** 669.
5. Morrow, A. G., cited by Wood, E. H., Sutterer, W., Swan, H. J., and Helmholz, H. F., Jr.: Proc. Staff Meet. Mayo Clin., 1956, **31,** 108.
6. Björk, V. O., Malmström, G., and Uggla, L. G.: Ann. Surg., 1953, **138,** 718.
7. Fisher, D. L., Childs, T. B., Ford, W. B., and Kent, E. M.: Left atrium pressure pulses in mitral valve disease, presented at the Annual Scientific Meeting of the American Heart Association in Chicago, Ill., April 1-4, 1954.
8. Blakemore, W. S., Schnabel, T. G., Jr., Kuo, P. T., and Langfeld, S. B.: Circulation, 1955, **12,** 680.
9. Björk, V. O.: Acta chir. scandinav., 1954, **107,** 466.
10. Fisher, D. L.: J. Thoracic Surg., 1955, **30,** 379.
11. Keys, J. R., Swan, H. J., and Wood, E. H.: Proc. Staff Meet. Mayo Clin., 1956, **31,** 138.
12. Fisher, D. L.: Personal communication.
13. Crafoord, C., in discussion on Fisher, D. L.: See ref. 10.
14. Blakemore, W. S., in discussion on Fisher, D. L.: See ref. 10.

THE MEDICAL MANAGEMENT OF HYPERTHYROIDISM*

LAURENCE H. KYLE, M.D.

Associate Professor of Medicine, Georgetown University School of Medicine

THE PAST SEVERAL YEARS have witnessed an unfortunate and unnecessary amount of controversy regarding the relative merits of various methods of treating hyperthyroidism. Most of this conflict has been resolved with appreciation of the fact that we now possess several effective modes of therapy—iodine, antithyroid drugs, radioactive iodine, and surgery.

There are really 2 aspects of treatment which, although inseparate, are best considered individually. First is the establishment of a euthyroid state; second is the maintenance of normal thyroid function, that is, "definitive treatment."

The term "definitive treatment" is usually applied to the surgical treatment of hyperthyroidism. However, surgery accomplishes removal of a large portion of the hyperfunctioning thyroid gland. The remaining portion is usually still hyperfunctioning, and in most cases the patient still has the basic hyperthyroid disease. Similarly, after treatment with radioiodine, a hyperfunctioning gland often remains. Actually, treatment with antithyroid drugs in some patients approximates truly definitive therapy, since long-continued administration of these drugs may result in an apparent remission of the disease.

Initial therapy is designed to induce a state of normal thyroid function. There is minimal controversy regarding this phase of treatment, which is best approached by visualizing the thyroid gland as consisting of 3 functional components. The first is the trap responsible for the collection of iodine. This component can be blocked by thiocyanate, hence the goiter and occasional hypothyroidism which result from use of this drug in the treatment of hypertension. To the present time, thiocyanate has served no practical purpose in the treatment of hyperthyroidism. The second function is hormone formation, which is referred to as organic-binding. It is at this level of glandular function that the antithyroid drugs, such as propylthiouracil or Tapazol, appear to exert their effect. The third function is hormone-release, since thyroid hormone cannot gain egress to the circulation until the large thyroglobulin molecule is broken down, a process apparently mediated by a proteolytic enzyme. Iodine appears to inhibit this proteolytic activity, hence the partial, and usually temporary, control of hyperthyroidism which results from the administration of iodine.

Iodine is not too satisfactory in the control of hyperthyroidism except in mild cases. I appreciate the fact that many competent physicians believe that iodine is efficacious in preparation for thyroidectomy, but I must raise the point that the patient who is readily controlled with iodine—one with mild to moderate thyrotoxicosis and a small gland—is the ideal patient for prolonged medical management. Consequently, when confronted with a patient who appears to be a suitable candidate for control with iodine prior to surgery, one should question the wisdom of using surgical treatment at all. Another stated advantage of iodine is its speed of action. It is undoubtedly true that iodine exerts more rapid control of thyrotoxic symptoms, but this control is usually not complete. One must then consider the need for haste, since, if complete control can be effected with antithyroid drugs and the patient is permitted to pursue his normal activities during this period of preparation, there need be no hurry to perform thyroidectomy. In my opinion, the main place of iodine is immediately preoperatively to decrease vascularity of the thyroid gland and thus facilitate the operative procedure.

---

* Presented at the Fifth Midwinter Seminar of the Medical Society of the District of Columbia in Washington, D.C., February 14, 1956.

Of the several effective antithyroid drugs available propylthiouracil and Tapazol have proved most satisfactory. Their ratio of effectiveness is about 10 to 1, that is, 40 mg. of Tapazol is roughly equivalent to 400 mg. of propylthiouracil. Minor toxic reactions are a bit more frequent with Tapazol; otherwise there is little difference between these drugs, and the following remarks concerning propylthiouracil can be applied equally well to treatment with Tapazol.

Dosage must be planned both for initial use and after partial control has been accomplished. It has become the practice to give larger and larger amounts of propylthiouracil as we have learned that toxic reactions are not only infrequent but also poorly related to dose. I start usually with no less than 300 mg. a day in the mild case and give as high as 600, 700, or even 800 mg. a day to the severely thyrotoxic patient. After partial control has been effected the dose can gradually be decreased, or, if immediate surgical or radioiodine therapy is planned, the large original dose can be continued until the patient is well controlled. Spacing of medication is extremely important. Because they are rapidly absorbed and rapidly excreted, antithyroid drugs should be given every 6 or 8 hours. In some circumstances it appears desirable to administer iodine concurrently with the antithyroid drug, as, for example, in very severe hyperthyroidism or in the patient with cardiac complications, because here one obtains the more complete control of the antithyroid drug plus the initial more rapid effect of iodine. When this is done it is advisable to start the antithyroid drug a few days or at least a few hours before iodine is begun.

One of the most difficult problems in treating hyperthyroidism is evaluation of the effects of treatment. Certain clinical features, such as gain in weight, slowing of the pulse rate, increasing emotional stability and change in eye signs, are of great help. On the laboratory side, protein-bound iodine determinations are of most value unless iodine or an iodinated thiouracil preparation is being given. Blood cholesterol determinations are of service mainly to indicate overtreatment. Occasional basal metabolic rate determinations are helpful, particularly if control values have been obtained and if one appreciates the fact that many people when well controlled show a BMR well in the minus range. Uptake of radioiodine, although excellent for diagnosis, is completely unsatisfactory for evaluation of therapeutic effectiveness of antithyroid medication.

Three types of undesirable reaction may accompany the use of antithyroid drugs. The first, hypothyroidism, is readily managed by temporary discontinuation of therapy or by decrease in dose. The major complication, granulocytopenia, is extremely rare and, in my opinion, probably no more frequent than might be encountered with many other popular medications. For this reason I do not subscribe to periodic determination of the white blood cell count. The problem of granulocytopenia appears much too rare to warrant the expense of this procedure and, more important, white blood cell counts are of little value. Granulocytopenia occurs so precipitously that it would be most unusual to detect the warning changes, even with very frequent white blood cell counts.

The most frequent toxic reactions seen with antithyroid drugs are fever and skin rash, apparently due to sensitivity. When these occur, one can usually forestall future difficulties by changing to the other antithyroid drug, because propylthiouracil and Tapazol are different chemically.

After the hyperthyroidism has been controlled 3 courses of action then become feasible: 1. Iodine may be added to the therapeutic regimen, and 10 to 14 days later subtotal thyroidectomy may be performed. 2. The antithyroid drug can be stopped, and 2 to 3 days later a therapeutic dose of radioiodine may be given. 3. The patient could also be continued on the antithyroid drug for at least 12 months, following which the drug may be gradually withdrawn with the hope that a permanent remission of the thyrotoxic state may have occurred. The remission rate in patients with hyperthyroidism who have been well controlled for at least a year is said to approximate 50 per cent. However, a very low rate of remission might be anticipated in patients with severe thyrotoxicosis, particularly when the thyroid gland is greatly enlarged or with the complication of progressive exophthalmos. On the other hand, prospects for remission are extremely favorable in patients with mild disease.

I must digress to point out that although radioiodine has been classified as a therapeutic agent to be applied preferentially after the hyperthyroidism has been controlled, this agent may also be used as the sole form of therapy. This approach is hazardous in the severely thyrotoxic patient or in one with thyrocardiac disease. Sharp exacerbation of symptoms may follow its administration in the patient with moderate hyperthyroidism who has been previously untreated. Consequently, the advisability of giving radioiodine without prior preparation must be questioned. Even if only a small fraction of patients so treated should encounter difficulties that would increase morbidity or even cause a fatality, the advantage of immediate therapy would be outweighed by its possible hazards.

There are a number of general factors to be considered in choosing one of these 3 major forms of treatment. These include the psychologic make-up and personality of the patient, the financial situation, the quality of available surgical care, the orientation of the physician toward medical management, the facilities for radioactive iodine, and others. More specific aid, in terms of this decision, can best be obtained by viewing these different forms of treatment in a comparative sense.

Propylthiouracil has both advantages and disadvantages. On the positive side it is effective and quite safe, relatively inexpensive, has little morbidity and practically no mortality, demonstrates no major secondary complications, and is best for areas without skilled thyroid surgeons. Most important, its use avoids an operation. Its disadvantages, however, are equally impressive. First of all, its use necessitates long-continued supervision which may become distasteful to both patient and physician. In terms of long-range treatment it is impossible to foretell the chances of remission in an individual case. Serious toxic reactions may occur, albeit in my experience very rarely. Most important, alleviation of symptoms may result in lapse of treatment with recurrence of severe thyrotoxicosis away from medical supervision.

Thyroidectomy also has both favorable and unfavorable aspects. Its advantages are a high remission rate in all type of cases, safety in skilled hands, and the fact that its application limits the need for close medical supervision. It is certainly best for patients who are prone to leave medical care and is particularly effective in nodular goiter. The disadvantages of surgery are multiple. First of all, it requires an operation, and this operation has a high incidence of complications. It is relatively expensive, has a higher mortality rate than other effective methods of treatment, and is not as available to the entire population as medical therapy.

The main advantages of radioiodine therapy are those of simplicity and effectiveness. It is relatively inexpensive and nearly devoid of complications. Its use requires no operation and less medical supervision than surgery or treatment with antithyroid drugs. Its major disadvantage is the fact that it requires special facilities and personnel which are not generally available. There is difficulty in estimating the correct dose, a fact which is primarily responsible for the high incidence of the post-therapeutic myxedema. There is the potential danger, as yet completely unproved, of inducing thyroid cancer. As mentioned heretofore, there may be exacerbation of symptoms following treatment with radioiodine, which can best be circumvented by obtaining complete or partial control of the disease with antithyroid drugs before the radioiodine is administered.

With these points in mind a few general suggestions might be made. In the patient with mild disease and a small gland, particularly when the patient's coöperation is excellent, I would recommend long-continued medical management, withdrawing the antithyroid drug slowly after the patient has been maintained at euthyroid levels for 12 months or longer, with good hopes of a permanent remission. If the patient has severe disease and a large gland, and especially when his coöperation is rather poor, control with antithyroid drugs followed by thyroidectomy should be given strong consideration. In patients over 40 years of age radioactive iodine is by far the method of choice. There are other special situations. In patients who have recurrent hyperthyroidism after surgery, radioactive iodine deserves strong consideration, irrespective of the patient's age. With complicating disease either radioiodine or long-term management with antithyroid drugs is satisfactory.

There are a few special problems that bear mention. First is the question of toxic adenoma. In my experience this is a rare entity. Most patients believed to have toxic adenomas turn out to have diffuse toxic goiters with hyperplasia and nodularity. In a true toxic adenoma surgery is probably the best mode of treatment after control has been effected with an antithyroid drug. In patients who are pregnant radioiodine must not be used after the diagnosis of pregnancy is well established because the fetal gland will retain iodine as early as 2½ or 3 months. Surgery is undesirable during the first trimester because of fetal complications which may result from anoxia and has been considered contraindicated in the last trimester. In most instances of pregnancy complicated by hyperthyroidism antithyroid drugs are eminently satisfactory if one is careful not to overtreat, that is, to allow the degree of hypermetabolism normally present during pregnancy.

Despite the large number of published articles and fairly good degree of agreement with respect to treatment of hyperthyroidism many errors continue to be made. Table 1 summarizes a few of the more frequent therapeutic errors that I have seen, or personally accomplished, in the treatment of thyrotoxicosis.

TABLE 1

Frequently Noted Errors in the Management of Hyperthyroidism

1. Inadequate dosage.
2. Ordering the drug "t.i.d."
3. Premature operation.
4. Premature cessation of medical treatment.
5. Use of iodine as the sole therapeutic agent.
6. Therapy with iodine prior to the use of antithyroid drugs.
7. Premature withdrawal of iodine when used in conjunction with an antithyroid drug.
8. Stopping antithyroid therapy too soon before surgery.
9. Trusting the patient.
10. Use of radioactive iodine therapeutically without preparation.

Probably the most frequent error is that of inadequate dosage. As experience with antithyroid drugs has grown it has become increasingly apparent that we previously tended to use inadequate amounts. Although patients vary markedly in dosage requirements, there should be no hesitancy to give large doses initially, with lowering of the dose as the patient is brought under adequate control. A second and very frequent failing is that of writing "t.i.d." orders. When given in this fashion, particularly in the hospital, the drug is administered during a short portion of the day, leaving a large segment of each 24-hour period when the patient is under entirely inadequate control. Obviously, when the patient leaves the hospital he will tend to continue the same manner of treatment. Ordering the drug with meals is less objectionable, but careful spacing of the dose every 6 to 8 hours is by far the best method of treatment.

Another frequent error of judgment is that of conducting operation prematurely. This policy is most probably based on the fact that many physicians familiar with the rapid response to iodine anticipate the same effect with the newer antithyroid drugs. As mentioned previously, rapid control is not imperative, and operation should not be performed until the patient is completely euthyroid and has regained lost weight.

Another major problem is premature cessation of medical treatment, a frequent occurrence when the patient feels well after 3 or 4 months of therapy and then wishes to stop his medication. In such cases rapid recurrence of thyrotoxicosis usually occurs, unfortunately often when the patient is away from medical treatment, with complete loss of all the value obtained by previous induction of a euthyroid state.

Another frequent problem is the attempt to control the patient completely with iodine which, as mentioned, is effective only in the mildly thyrotoxic patient and not ordinarily adequate for long-sustained medical management. Another closely allied problem is that of giving iodine before propylthiouracil is started in an effort to obtain more rapid control of the symptoms. When this is done the patient's symptoms may become more severe, and in some individuals adequate control is never effected as long as iodine is being given, even with concurrent use of large amounts of propylthiouracil.

A closely related problem has been premature withdrawal of iodine, since when iodine and antithyroid drugs are given together and iodine is withdrawn too early a rapid exacerbation of symptoms may occur. It must be remembered that antithyroid drugs do not exert complete effect for several weeks after their initial introduction. One of the gravest problems, now fortunately seen much less frequently, comes from stopping the antithyroid drug too long before surgery, usually at the time iodine is started in the immediate preoperative period of preparation. If the patient has been well controlled for several months, this practice may occasion no difficulty, but if complete control is barely effected and propylthiouracil is stopped when the iodine is started in preparation for thyroidectomy, a very severe exacerbation of the disease may occur. In some such cases that I have seen, recontrol of the disease took much longer than was the case initially.

Another problem that must be mentioned is that of placing undue trust in the patient. Only in the last few years have I realized how often patients on regular medication fail to take what is prescribed. When I formerly asked patients if they had omitted any doses the answer was invariably no. More recently I have adopted the policy of asking the patient how many doses he has missed or the average number missed per week. It has been quite amazing to find how frequently even the more coöperative patient omits some of his medication. Such problems seriously complicate proper maintenance in long-term therapy.

The last problem, also mentioned previously, is the use of radioiodine in patients with severe disease or complicating cardiac problems without previous preparation. Many such patients become quite ill, and fatalities have resulted.

Many more errors are made and others will probably come about in the future. If these points listed are kept in mind, treatment with antithyroid drugs is, on the whole, eminently satisfactory under the conditions specified.

In brief summary, it appears that the modern treatment of hyperthyroidism is a nice blend of the art and science of medicine—the art to select the best treatment for each particular case, the scientific judgment to use that mode of therapy properly.

AGAMMAGLOBULINEMIA: A SYNDROME*

JOHN J. McPHAUL, JR., M.D.

Intern, Georgetown Service, District of Columbia General Hospital

WRITINGS about the syndrome of agammaglobulinemia have become voluminous since the original description of a case by Bruton[1] in 1952. With the multiplicity of reports of single cases, it is timely to evaluate the subject, its basic phenomena, varied manifestations, and profound implications.

The essential features of the original case described in detail by Bruton consisted of (1) "complete absence" of gamma globulin in human serum, (2) normal total protein values, (3) striking susceptibility to recurrent infections, (4) absence of circulating antibodies, (5) absence of edema, and (6) protection by prophylactic administration of gamma globulin.

Since the definition of this condition in the American literature,[1, 2] well over 40 cases have been reported, about one-half of them in children.[2–5] Most cases were investigated very elaborately. Many more unreported cases are known to exist. The entity eventually will be found to be far more common than indicated at this time, as was shown by Good[4] and Janeway,[3] who collected 7 and 6 cases respectively in their clinics in a very short period.

By definition, agammaglobulinemia is the absence of a group of proteins present in normal human plasma with which are associated the antibody properties of blood. Almost all of the antibodies of human blood are in the gamma globulin fraction. However, as Young[6] points out, the deficiency is more precisely a deficit of immunoglobulin, inasmuch as the antibody part of beta-2-globulins is missing as well.

The term "agammaglobulinemia" is misleading inasmuch as the gamma globulins seldom are absent completely from human plasma, when very sensitive technics of investigation are employed. However, the term is firmly entrenched and more facile than alternates.

A crude classification of the syndrome of agammaglobulinemia is possible from available data and facilitates discussion:

A. Physiologic agammaglobulinemia
B. Congenital
C. Acquired
    1. Idiopathic
    2. Secondary

PHYSIOLOGIC AGAMMAGLOBULINEMIA

Investigations by Orlandini and others[7] have shown that serum gamma globulin values in newborn term infants approximate adult values of 600 to 1,200 mg. per 100 c.c., or 13 to 17 per cent of total serum proteins. This globulin fraction apparently has been obtained from the maternal circulation. Adequate synthesis of gamma globulin by the infant, however, does not occur until the age of 4 to 12 weeks.[8] As a result of normal degradation of the maternal globulin, values at age 1 month are roughly one-third of the newborn value. As immature production capacity approaches the degradation rate the level of gamma globulin remains stable until the age of about 3 months, at which time production capacity exceeds degradation and gamma globulin values rise to near adult values by the age of 2 years.

Because this period is usually short-lived little clinical difficulty is encountered. An added factor is that the low levels of gamma globulin which remain are probably adequate in most cases to protect the infants from serious illness. Exceptions may occur, as suggested by Spain et al[9] in cases of sudden and unexpected death in infants aged $1\frac{1}{2}$ to $3\frac{1}{2}$ months, at which age postmortem examinations have correlated pathohistologic conditions similar to that found in nonimmune animals with low serum levels of gamma globulin. A case of generalized vaccinia in an infant girl who died at the age of 15 weeks may belong in this group also, but the incredibly low level of gamma globulin reported in this case is suggestive of a dysproteinemic state rather than the usual physiologic condition.[10]

---

* EDITOR'S NOTE: This paper was written while the author was a senior medical student at Georgetown University School of Medicine.

CONGENITAL AGAMMAGLOBULINEMIA

Cases described under this category are presumed to be congenital in origin for the following reasons[3, 8]:

1. Suggestive familial history.
2. All reported cases thus far occurring in boys, with the possible exception of the infant girl dead with vaccinia, described heretofore.
3. Onset at an early age, although most of these children handle themselves adequately until the age of 3 or 4 years without serious medical problems.

There is a notable lack of associated congenital lesions in these children, but the proposed mechanism is a sex-linked, recessive gene such as operates in hemophilia.

The clinical manifestations in these patients are protean, but in all cases the common finding is recurrent, frequent, severe bacterial infections, interspersed with recurrent viral infections of the type that usually provide lasting immunity after a single illness. Thus occur repeated episodes of pyoderma, purulent conjunctivitis, purulent sinusitis, pharyngitis, bronchitis, pleurisy, pneumonia, bronchiectasis, septicemia, meningitis, osteomyelitis, diarrhea and sprue-like states, proctitis, genitourinary tract infections, arthritis, mumps, pertussis and rubella.

It is suggested by many investigators that this is a disease state uncovered by the advent of antibiotics, because few could survive such repeated, severe, septic illnesses in the pre-antibiotic era.

An important concept is that patients suffering from agammaglobulinemia usually react to the acute phase of infections in the same manner as other patients with normal globulin levels and unimpaired immunologic defenses. This is to say that most of these patients react with fever, leukocytosis, increased erythrocyte sedimentation rate, C-reactive protein and mucoprotein levels, and acute inflammatory cellular response in the infected tissues. The response to well-chosen antibiotics in adequate dosage is usually quite prompt.

What is lacking is the capacity to respond to an infection with the usual immunologic defenses of local and circulating antibodies to modify the course of the infection of the moment and protect the individual from future attacks by the same type organisms. Hence, we find in Bruton's case repeated sepsis in which pneumococci were cultured from the blood on 10 separate occasions in a 4-year period, with the same organisms (types 6 and 33) being recovered twice each, and three episodes of epidemic parotitis. Keidan's case of fatal vaccinia without production of neutralizing antibodies, and all other cases of agammaglobulinemia reported have as their outstanding feature an inability on the part of the host to manufacture detectable antibody titers, even on repeated antigenic challenges.

In spite of this, infections by viral invaders are usually self-limited, probably because of the nature of the organism, which is an intracellular parasite, and the possibility of some defense at the intracellular level which is not reflected in an antibody titer.

ACQUIRED AGAMMAGLOBULINEMIA

Acquired agammaglobulinemia is so termed because of (1) apparent onset later in life (adults), (2) lack of an obvious family history, and (3) occurence in both males and females.

The acquired syndrome can be classified conveniently as either idiopathic or secondary; the distinction is based on the apparent absence or presence of an obvious underlying disease state causing the dysproteinemia.

The most frequent underlying disease states associated with secondary agammaglobulinemia are nephrosis, nutritional deficiency, idiopathic hypoproteinemia with edema, chronic lymphocytic leukemia, malignant lymphoma, Hodgkin's disease, multiple myeloma and sarcoidosis. The mechanism responsible varies. There may be excessive urinary loss of globulin, deficient protein production generally, production of abnormal and antibody-deficient globulins, or infiltration of the sites of antibody production. I shall not consider the secondary form any further because this discussion concerns agammaglobulinemia as a disease in its own right.

The idiopathic syndrome usually is manifested by spontaneous onset of recurrent, severe infections, usually of bacterial origin in a generally well male or female.[11, 12, 13] As in the congenital type, minute amounts of gamma globulin occur, and there is a dearth of circulating antibodies. Differences from the congenital type are incidence in both sexes, a long history of good health, presence of larger quantities of gamma globulin than in the congenital group, frequent finding of adenopathy, and therapeutic response. The usual clinical states are as described before, with bronchiectasis a common finding.

The basic defect in all forms is a deficiency of immunoglobulins, most of which are found in the gamma globulin fraction of the plasma proteins. The deficit is probably the result of inadequate globulin production inasmuch as no excessive loss of globulin occurs as in nephrosis and the nephrotic syndrome in which the urinary loss is great. The half-life of injected radioiodine-tagged globulin in these people is normal or even slightly prolonged, being in the neighborhood of 12 to 30 days, indicating that excessive catabolism of globulin is not a factor. More specific evidence of deficient production will be presented later.

Good's 6-phase study[4] of the "immunological paralysis" established basic criteria confirming the concept of production deficit:

1. Evidence of antibody formation to antigens commonly known to stimulate normal persons.
2. Induction of antibody production by stimulation with potent bacterial antigens.
3. Study of "natural" antibodies, i.e., measurement of the capacity of serum in these patients to agglutinate heterologous blood group cells.
4. Stimulation of formation of iso-agglutinins against heterologous blood group substances by parenteral injection of mismatched cells.
5. Measurement of the antibody response to certain potent virus antigens.
6. Study of skin reactivity to allergenic bacterial products, such as tuberculin, pneumococcal and streptococcal derivatives.

All reported cases that have been tested to any or all of these standards of study are deficient in toto or in large measure, as compared to results routinely obtained from normal controls.

Lack of naturally occurring antibodies such as blood group iso-agglutinins, incomplete or totally absent capacity to respond to powerful antigenic stimuli by antibody production, and extremely low or absent serum gamma globulin values, especially in states of chronic infection in which one might expect a rise of the gamma globulin fraction, imply that (1) antibody production is associated in large part with the production of gamma globulin, and (2) production of gamma globulin is deficient. Pathohistologic, hematologic, and tissue studies tend to confirm these implications.

Laboratory Diagnosis

Chemical determinations of serum proteins are done in several ways. The most satisfactory and easiest technics utilized in the diagnosis of agammaglobulinemia are:

1. *Immunochemical:* Gitlin[14] describes the use of horse antiserum against human gamma globulin incorporated in agar and placed in a long, thin capillary tube. Serum of the patient is placed overlying the antiserum-agar in the tube and allowed to stand at room temperature for 18 to 24 hours. The presence of a band of precipitate in the agar indicates the presence of gamma

globulin in the serum, and the concentration can be inferred from the distance the band has migrated from the interface. The usual values found in the congenital syndrome are less than 30 mg. per 100 c.c. and in the adult, acquired syndrome less than 100 mg. per 100 c.c.[15]

2. *Filter-paper electrophoresis* is accomplished by the method of Kunkel and Tiselius,[16] in which serum is placed on filter paper soaked in buffer and suspended by glass plates between coiled platinum electrodes, with the ends of the filter paper immersed in buffer. Current of known, constant intensity passes through the circuit, and the serum proteins migrate with the current according to their molecular weights. By staining the paper, eluting the dye, and determining the concentration by spectrophotometric means, or by spectrophotometric examination directly, a quantitative value of the partition is obtained, the results of which are surprisingly accurate. The method is simple and accurate, and has the advantages that several sera can be run concomitantly for direct comparison; moreover, the protein fractions are separated and available for isolated study.

3. *Turbidimetric technic* as described by Kunkel[17] is simple and useful. It utilizes the principle of protein precipitation upon dilution of serum with solutions of low ionic strength, and the fact that gamma globulin is the first protein precipitated. Analysis of normal sera yielded evidence of the optimum strength of buffered zinc sulfate solution to precipitate normal and elevated globulin concentrations. In normal persons values of 2 to 8 units of turbidity are found by this method. Absence of turbidity by the Kunkel technic is presumptive of a very low serum gamma globulin concentration. It is more sensitive than the thymol turbidity test to the elevation of gamma globulin and is subject to lesser error.

Satisfactory, simple, and inexpensive screening tests for the presence of agammaglobulinemia are the Kunkel turbidity test, and the test for isohemagglutinins in the patient's serum,[3] inasmuch as these are among the antibodies deficient in this syndrome. For obvious reasons the latter test is not satisfactory in a patient with blood group AB. A high albumin-globulin ratio in a patient in whom one might expect a low or reversed ratio also should raise suspicion of this syndrome.

It is important to keep in mind that some antibodies are not found exclusively in the gamma globulin group of serum proteins. For instance, blood group iso-agglutinins, typhoid "O" agglutinins, and true Wassermann reagins are associated with the beta-2 globulin fraction. However, these antibodies are also deficient in the syndrome of agammaglobulinemia.

Immunologic studies of the syndrome reveal lack of naturally occurring antibodies, such as isohemagglutinins, and commonly found antibodies, such as anti-streptolysin O, Forssman, and cold agglutinins. Moreover, repeated inoculations with typhoid, paratyphoid A and B, diphtheria toxoid, and pertussis organisms fail to result in demonstrable titers of antibodies in response to the challenge. Consistent with this, one fails to demonstrate complement-fixing or neutralizing antibodies against such strong viral and rickettsial antigens as those of mumps, poliomyelitis, influenza, typhus and spotted fever. In most cases these patients will give positive skin tests to Schick and Dick toxins, and negative tests to purified protein derivative, coccidioidin and histoplasmin extracts, although a few cases of trace to one plus positive reactions are reported in response to the last-mentioned.[4] Janeway[3] describes primary takes following inoculations with vaccinia virus, followed by immune reactions on subsequent reinoculation several weeks later in some of his cases.

Of more than academic interest is the successful homotransplant of skin reported by Varco and Good.[4] These investigators accomplished a split-thickness graft from one of their congenital agammaglobulinemia patients to a suitable recipient suffering from burns. This graft became necrotic at 2 weeks and sloughed at 4 weeks, as usually occurs. However, split-thickness and full-thickness grafts were taken from a 45-year-old woman at laparotomy and grafted to the same agammaglobulinemia patient, and at last report had survived in good condition 11 months later.

Hematologic and histopathologic studies in a variety of different instances of the syndrome (excluding the secondary group) are considered together most advantageously, and in some respects are in agreement, but in others appear contradictory. Hemolytic anemia has been reported in this syndrome, usually in association with splenomegaly, although splenectomy has no beneficial effect.

Although most reported patients exhibited a leukocytosis in the face of infection, others displayed persistent, cyclic, or transient leukopenia.[4] Eosinopenia is very common, although eosinophilia has been reported. Young[6] made a particular point of emphasizing lymphopenia in 3 of his 4 cases.

Likewise, there is not good correlation between the presence of adenopathy or splenomegaly and the histologic state of the lymphoid tissue at biopsy or postmortem examination. Splenomegaly and tender, enlarged nodes occurred in several cases, more often in adults, and a thymoma also occurred in 1 of Good's adult cases. However, even in these cases histologic examination has revealed an atrophy or failure of proliferation of the germinal follicles and the absence of plasma cells.[4, 18, 19] Good[4] has described an increase in the fibrous stroma, increase in the number of germinal centers, and increase in the activity or budding of lymphocytes, but absence of plasma cells, even in serial, regional lymph node biopsies following antigenic challenges by potent vaccines.[20] The most constant histologic finding is a decrease to total absence of plasma cells on examination of lymph node, bone marrow, or tissue specimens obtained at biopsy or post mortem.

The demonstrable and conspicuous lack of plasma cells assumes more importance when it is pointed out that these cellular elements of the reticulo-endothelial tissues are in notable abundance in conditions associated with hyperglobulinemia and elevated antibody titers such as rheumatic fever. However, the post mortem performed on the child cited before, dead of generalized vaccinia, yielded specimens from spleen and lymph nodes containing abundant monocytes and plasma cells.

Good[4] has suggested that the apparently contradictory clinical manifestations and laboratory results found in this syndrome reflect "diverse actions of bacteria or virus agents on the reticulum; . . . in these diverse but profound hematologic disturbances is reflected a disease of the reticulum or some organizer of the reticulum function which finds absolute expression in failure of antibody production and plasma cell proliferation." Put another way, we may theorize that this is a basic disease of the reticulo-endothelial system with varying degrees of malfunction in less severe or incomplete cases, but in its most complete form is expressed by absence of plasma cells and complete "immunological paralysis."

THERAPY

Therapy is directed at prompt treatment of the acute infections and prevention of recurrent infections and complications resulting therefrom. Antibiotics, wisely chosen, and administered in adequate dosage, are the therapy of choice for acute infections. Clinical response is generally good. Occasionally, gamma globulin in combination with antibiotics is necessary to secure response.

Preventive therapy is based on the administration of gamma globulin, in doses of 0.1 Gm. per Kg. every 2 to 3 weeks. Frequently this is not successful; failure is encountered more often in adults than in children. In such instances antibiotics may be administered prophylactically. It is worth remembering that the virus of homologous serum hepatitis is not associated with the gamma globulin fraction and that there is little danger of serum hepatitis even with prolonged administration of gamma globulin. In all cases sound judgment and stout supportive therapy are invaluable assets in good care of these patients. Nevertheless, this syndrome has carried a considerable mortality in the cases reported.

The case report by Grant and Wallace[21] was thought-provoking because of its more unusual features, among which was a 6-month period of remission of symptoms, without any therapy at all, immediately following the period of her most severe illness. Equally interesting was Rosecan's patient,[22] who was demonstrated to have acquired agammaglobulinemia but whose history was singularly free from infections. Indubitably, as awareness of this syndrome grows and the search for cases widens, milder forms frequently will be discovered.

Clinicians should heed the admonition by Gitlin[8] to diagnose these cases as soon as possible and treat them prophylactically before irreversible anatomic damage occurs.

It is obvious that there are a host of unanswered questions concerning this syndrome but its very existence offers an unparalleled opportunity for investigation of the fundamental mechanisms of immunity and suggests the further possibility of existence of other specific deficiencies in blood such as already are known to occur in hemophilia and afibrinogenemia.

Moreover, further investigation holds the key to elucidating better treatment for these unfortunate victims of gamma globulin deficiency and perhaps to unraveling the mystery of the so-called collagen vascular diseases, rheumatic fever and nephritis.[4]

Summary

The syndrome of agammaglobulinemia has been discussed with respect to its definition, classification, basic characteristics, incidence, laboratory diagnosis and treatment.

Attention is called to suggestive clinical states such as recurrent bacterial infections, failure to demonstrate expected inoculation responses, bronchiectasis, generalized or progressive wound infection, and frequent cellulitis.[23]

Easy screening tests are available.

Fundamental malfunction of the reticuloendothelial system with absence of plasma cells and deficient production of gamma globulin is postulated.

Plea is made for greater awareness, earlier diagnosis, and more adequate treatment of these patients.

BIBLIOGRAPHY

1. Bruton, O. C.: Pediatrics, 1952, **9**, 722.
2. Bruton, O. C., Apt, L., Gitlin, D., and Janeway, C. A.: A.M.A. Am. J. Dis. Child., 1952, **84**, 632.
3. Janeway, C. A., Apt, L., and Gitlin, D.: Tr. A. Am. Physicians, 1953, **66**, 200.
4. Good, R. A.: Bull. Minnesota Hospitals, 1954, **26**, 1.
5. Hayles, A. B., Stickler, G. B., and McKenzie, B. F.: Pediatrics, 1954, **14**, 449.
6. Young, I. I., Wolfson, W. Q., and Cohn, C.: Am. J. Med., 1955, **19**, 222.
7. Orlandini, T. O., Sass-Kortsak, A., and Ebbs, J. H.: Abstr., A.M.A. Am. J. Dis. Child., 1952, **84**, 632.
8. Gitlin, D.: Bull. New York Acad. Med., 1955, **31**, 359.
9. Spain, D. M., Bradess, V. A., and Greenblatt, I. J.: J.A.M.A., 1954, **156**, 246.
10. Keidan, S. E., McCarthy, K., and Haworth, J. C.: Arch. Dis. Childhood, 1953, **110**, 28.
11. Zinneman, H. H., Hall, W. H., and Heller, B. I.: J.A.M.A., 1954, **156**, 1390.
12. Prasad, A. S., and Koza, D. W.: Ann. Int. Med., 1954, **41**, 629.
13. Editorial: New England J. Med., 1955, **252**, 285.
14. Gitlin, D., in Cole, W. H., editor: Conference on Protein Metabolism: Serological Approaches to Studies of Protein Structure and Metabolism. New Brunswick, N. J.: Rutgers Univ. Press, 1954, p. 23.
15. Gocke, T. M., Porfido, F. A., and Gallagher, E. J.: Agammaglobulinemia, presented at Medical Grand Rounds of Georgetown University Hospital, March 22, 1955.
16. Kunkel, H. G., and Tiselius, A.: J. Gen. Physiol., 1951, **35**, 89.
17. Kunkel, H. G.: Proc. Soc. Exper. Biol. & Med., 1947, **66**, 217.
18. Seltzer, C., Baron, S., and Toporek, M.: New England J. Med., 1955, **252**, 252.
19. Collins, H. D., and Dudley, H. R.: Ibid., 1955, **252**, 255.
20. Good, R. A.: J. Lab. & Clin. Med., 1955, **46**, 167.
21. Grant, G. H., and Wallace, W. D.: Lancet, 1954, **267**, 671.
22. Rosecan, M., Trobaugh, F. E., Jr., and Danforth, W. H.: Am. J. Med., 1955, **19**, 303.
23. Latimer, E. O., Fitzsimons, E. J., and Rhoads, P. S.: J.A.M.A., 1955, **158**, 1344.

ANOREXIA NERVOSA: A REVIEW*

MALVIN COLE, A.B.

Senior Student, Georgetown University School of Medicine

FOR ALMOST a century, anorexia nervosa has captured the interest of some of the great clinicians of America and Europe, especially in England. Studies of anorexia nervosa have commonly appeared in America only in the last 20 years.

In its more marked manifestations one cannot call anorexia nervosa a common disease, but in minimal or subclinical forms, it is probably much more common than we realize. This disease provides us with a unique and exceptional chance of studying the interrelation of metabolic and psychologic changes in the human being.[1] The disease remains a mystery, since the real physiologic and psychologic interrelationships are very little known. In fact, one can ask the question, "Is there any real separation between the two, even for purposes of discussion?"

The confusion that has and does exist about this condition will be well illustrated in this paper. In each part of the discussion opinions vary as to etiology, psychogenic factors, prognosis, and treatment. This variance can be minimal or can give markedly contrasting answers to the very same question. Very often they depend upon the clinician's own orientation. For those interested in the history and development of modern medicine, anorexia nervosa provides an adequate mirror of the changes in medical ideas during the last 50 years.

HISTORY

Perhaps the earliest description of this syndrome was that of Morton in 1694.[2, 3, 4] In his "Phthisiologia," Morton termed this disease phthisis nervosa or atrophia nervosa. He stated, "The pathognomonic signs are, a decrease of the patient's strength, and a loss of appetite, without any remarkable fever, cough, or shortness of breath, though some difficulty can be observed as happens to all those who are under a great weakness. The immediate cause of this behavior I apprehend to be in the system of the nerves, whereupon I used to call this a consumption in the habit of the body and the whole habit of the body from the distempered state of the brain and nerves. The causes which dispose the patient to this disease, I have for the most part observed to be violent passions of the mind." This description in 1694 was as good a description of the clinical picture and etiology as exists.

Most of the modern clinicians refer to the papers of Gull[5, 6] in 1868 and 1874 as the classic descriptions of the disease. In his first paper[5] Gull said, "Morbid brain disorders may give rise to a variety of disorders apparently distinct from their original cause. There is a neuropathology from the brain to the tissues as there is a reverse order of disturbance from tissues to brain. The intellectual disturbance in one may appear as epilepsy, in the second as gastric acidity, in the third as some peculiar neuralgia, and in others as amenorrhea, hematemesis, or hemoptysis. It would seem as if sometimes this morbid brain action expended itself upon the voluntary muscles. Thus we avoid the error of supposing the presence of mesenteric disease in young women emaciated to the last degree through hysteric apepsia by our knowledge of the latter affection." When first seeing these cases Gull thought of latent tuberculosis or mesenteric disease (probably this also refers to intestinal tuberculosis). After using the term apepsia hysterica in 1868 and in his paper in 1874 he changed and came to the use of the term anorexia hysterica, in accordance with Lasegue. He then finally called the disease anorexia nervosa.[6]

---

* EDITOR'S NOTE: This essay was written while the author was a third-year student at Georgetown University School of Medicine.

Lasegue also called this hysterical anorexia and described it as a disease of young females. He also considered it psychologic in origin.[2] During the next 20 years there was not too much mention of the disease in the English literature. In the 1890's Samuel Gee referred to it as nervous atrophy. One might note that this was perhaps the end of the first so-called "psychologic period" of anorexia nervosa.

The "endocrine period" probably began in 1914 when Simmonds reported it with pituitary destruction, but this is a different and definite clinical pathologic entity. There has been much writing on the condition from the endocrinologic point of view. Since the 1930's one might again consider the disease to be studied by many as a manifestation of psychologic difficulties. In 1931 Allison and Davies[7] spoke of it as functional anorexia. In 1936 Ryle[8] called it, in its graver forms, anorexia psychotica; he also called this Gull's disease. Zondek and Koeheler[9] termed it *magersucht*, which by definition means the contrary of obesity, but with implied morbidity. In 1940 Magendantz and Proger[10] combined the psychologic and endocrine aspects of this disease and termed it functional Simmond's disease. Now many consider this to be a primary psychologic disease.[2] But even these people disagree as to its exact classification, as will be noted under the psychodynamic discussion.

Etiology

In the literature many body systems and a variety of clinical conditions have been incriminated as causative or precipitating factors in the development of anorexia nervosa. Strangely, the first of these might be malnutrition itself. It is well known that severe diet restrictions will, after a period of time, inhibit hunger via the inhibition of gastrointestinal peristalsis and motility. Some authors consider malnutrition to be a causative factor in the development of the entire syndrome of anorexia nervosa.[11, 12] Others, such as Richardson,[13] pointed out that malnutrition, as part of the disease, causes many of the symptoms, rather than the disease itself. French[14] pointed out that severe vitamin B deficiency will cause anorexia. Thus, some see that malnutrition can be the mechanism of limited manifestations of a disease, and also the disease entity itself. This can become a vicious cycle, with the initiation of the disease increasing malnutrition and thus making the disease more severe. Richardson[13] (case 3) described a case of anorexia nervosa following trauma after falling from a horse. Venables[15] reported a case following severe constipation. Many authors noted cases following operation. These include appendectomies and tonsillectomies.[15, 16] Ryle[8] in his series of 51 cases saw 9 (17.6 per cent) following operation or active illness. This was especially true in the postmenopausal woman. If one were to think of the psychogenic theories of etiology he might suppose that illness or operation throws a precarious psychologic balance into the disease state; that is, a person who is functioning at a borderline level before sickness or operation could no longer do so afterwards. This can be manifest as failure of the pneumogastric nerve, as described by Gull.[6]

Following intracranial lesions the mechanism has been studied extensively. Brobeck[17] spoke of injury to the hypothalamus causing aphagia as well as hyperphagia. That author believed that there is a lateral hypothalamic mechanism stimulating eating and a medial hypothalamic mechanism inhibiting eating. These are called the appetite center and satiety center. Other authors have shown the relation of intracerebral mechanisms to gastrointestinal secretion and motility.[18] They have shown that stimulation of area 8 increases gastric secretion of pepsin and hydrochloric acid. Lobotomy, on the other hand, decreases gastric activity. Pre-motor ablation can stimulate hunger, and lesions to the orbital surface of the frontal lobe are closely related to bulimia. The flow of gastric juice depends upon cortical integrity, and in 1936 Levin showed that the cortico-hypothalamic centers are involved in the mechanisms of hunger and gastric secretion. As to specific lesions, Berkman,[19] in 1930, pointed out that anorexia nervosa can follow narcolepsy, parkinsonism, and encephalitis. Similarly, this can be a manifestation of endocrine and psychological disease. Sheldon and Young,[20] Richardson,[13] and others considered this a constitutional endocrine disease.[2] Ross[11] pointed out that partial starvation leads to impaired glucose tolerance. He claimed that this interferes with lowered blood glucose levels which are essential for hunger, and thus prevents the onset of hunger. This he called a hunger strike. Thus, he blamed the disease on impaired carbohydrate metabolism, but he never explained why the original carbohydrate metabolism was impaired. Once again one cannot tell whether the carbohydrate metabolism is a cause or a result of the disease. Sheldon[21] called it a disease due to some pituitary abnormality. Langdon-Brown[22] went further and described it as functional adrenal insufficiency due to hypopituitarism. Palmer and Jones[23] attempted to differentiate organic, fatal Simmond's pituitary cachexia from emotionally caused, benign functional pituitary cachexia.[21]

Other authors have attempted to correlate endocrine and psychologic etiologies of the disease when they postulated close association between suspected emotional centers located in the diencephalon and the pituitary gland; they realized that with neoplasms of the pituitary fossa one can get psychologic manifestations. They pointed out, furthermore, that any pituitary disease can cause or be the result of psychologic disturbances. Some wondered whether all cases of true Simmond's disease are purely physiologic, and they referred to the fact that some diseases are psychogenic at first but that morbid physical-chemical findings supervene. Conversely they pointed out that in organic Simmond's disease, i.e., pituitary necrosis, there can be emotional factors superimposed.[13, 22, 24, 25]

Sheldon[21] stated, "It is possible that there is a special type of body mind which is peculiarly apt to develop anorexia nervosa in response to emotional difficulty." Gull[6] called this state hysterical, and he stated, "The want of appetite is, I believe, due to a morbid mental state . . . the origin is central and not peripheral." DuBois[2] called this disease a compulsion neurosis with cachexia as a leading symptom. Psychiatrists disagree as to the proper classification in the psychiatric schema.

Clinical Features

INCIDENCE

The following study is a review of over 208 cases taken from the literature. Since all papers on the subject do not fully tabulate their cases the exact number studied is not known.

The disease is more common in females by an incidence of 4 to 1.[26] Berkman,[19] in a series of 117 cases between 1917 and 1929, had 89 females (77 per cent); Ryle[8] in 51 cases found 46 females (90 per cent). The age range has been decribed as from 18 to 25 years by DuBois,[2] as 20 years with a range of 16 to 28 years by Venables[15] in 9 cases, and as 33 years by Allison and Davies.[7] In the series mentioned above[8] 33 of 46 females (71 per cent) have been under 30 years of age. The usual range for males has been defined as 19 to 31 years.[8] In 1 series[19] 2 males out of 28 (6 per cent) were over 40 years old. Anorexia nervosa has been found in postmenopausal females.[8] Four patients out of 89 have been over 40 years (4 per cent).[19] In most cases the people with the condition are unmarried.[2, 8] One author[8] saw 6 of 51 cases (11 per cent) in the hospital.

In a paper placing great stress on physical constitution as one of the etiologic factors in anorexia nervosa Sheldon[21] found a greater incidence in patients of very small stature, who were usually underdeveloped sexually; of 45 cases 12 per cent had a retarded menarche; others had few periods which later ceased. There is marked disagreement as to whether it is more common in upper or lower financial classes.[8, 19] Since Anderson,[27] in a communication with Gull, found that his patient was formerly plump, many others have observed that adolescent or preadolescent obesity commonly precedes the condition[13]; it often begins after or during a reducing regimen.[28] Those who prepare food for others, or who lead an indoor life, are supposedly more susceptible.[7]

SYMPTOMS

Some of the most prominent clinical features of anorexia nervosa are loss of appetite with cachexia, hypertrichosis, amenorrhea, constipation, and low basal metabolic rate.

Rather than saying that appetite is absent, since there is disagreement on this point, one may simply say that the patient refuses to eat. Pardee[26] found in 2 out of 10 cases that the patient actually had a craving for food but could not eat. He found that none had actually lost his appetite (his cases 1 and 8). Ross[11] did find that appetite was absent, but Waller, Kaufman and Deutsch[29] found that the patient usually has a disgust toward foods rather than an actual loss of appetite. Be that as it may, weight loss is often extreme, having been reported up to 100 pounds.[19] Sir William Osler[30] described these patients as being emaciated, with marked retraction of the abdomen, sunken eyes and dilated pupils comparable only to that of an esophageal cancer.

Many observers have been extraordinarily impressed with the hyperactivity and excess energy that these patients often show. They never seem to tire; they seem anesthetic to fatigue. They are often restless. Of course, in advanced stages this often gives way to extreme weakness. Weakness has also been noted in early stages.[29] Another observation commonly made is that the patients admit but are not impressed by their paleness and wasted condition. They seem preoccupied and show indifference to their symptoms; they are often apathetic.[19, 31, 32] Nevertheless, pallor can be so marked that the disease is often confused in the early stages with severe anemia.

As mentioned, amenorrhea is often a prominent feature of the disease. In fact, some think that it must be present for the diagnosis of this condition, but others disagree, Berkman[19] reporting it in only 53 per cent of cases. Amenorrhea can precede the anorexia by several weeks. It can also occur with it, or occur weeks or months after the anorexia develops. The mechanism has been described in many ways: as a symptom of wasting due to the anorexia and inanition itself[11]; also as an hysterical or functional symptom that develops independently of, but parallel to, the anorexia.[21] In certain cases it might be related to subnormal pituitary function. It has been claimed that patients often show a late onset of menses and of secondary sexual characteristics. Many do not show these until the age of 19 years or over.[13]

Pardee[26] pointed out that hirsutism is a very common finding. This is a differential point with Simmond's disease. It is described as a fine, lanugo-type hirsutism often found over the posterior region of the shoulders. On the other hand, unlike Simmond's disease, there is no loss of axillary and pubic hair.[10]

In all of the cases described by Gull[6] the pulse and respirations were decreased. He believed that this was due to the anorexia itself. The blood pressure is usually lowered, and most patients present a trend toward definite arterial hypotension.[7, 19] The patients often complain of feeling cold; their extremities can feel cold and their skin can appear bluish white; the temperature is usually subnormal, in the range of 95° to 98°F.[2, 10] Also, in contradistinction to Simmond's disease, the patients often have good teeth. Blue sclerae have been described in this condition.[26] Even in patients showing extreme emaciation and cachexia the breasts have been noted to show little or no atrophy. Many of the above findings can be due to resulting malnutrition, or they might be explained as a homeostatic adjustment of the total psychobiologic unit to the stress placed on it.

Vomiting has been described in 56 per cent of cases.[19] This usually occurs after eating, and is seen especially when food is forced on the patient.[13, 23] Mitchell[33] thought that the patients develop such an aversion to food that "some type of gastrointestinal spasm" results from attempts to eat and, if forced to eat, they vomit. Spasm itself is a fairly common psychophysiologic manifestation; perhaps aversion to food is an aftermath of very severe and prolonged spasm. Indeed, many cases have been reported as beginning insidiously with vague gastrointestinal complaints, especially after eating. These people often feel discomfort and nausea immediately after taking a meal. Often they begin to decrease their intake to rid themselves of these symptoms, and slowly anorexia nervosa develops. In such cases the disease has a subtle beginning, and who can say whether the spasm results from aversion to food or that aversion to food results from spasm? It is probably accurate to claim that both are closely related, and again one may mention that both are a total response of a functioning psychobiologic organism. One may point out that vomiting, once the disease has begun, can become a major problem from many points of view. It further increases already existing malnutrition and can have severe influence on the electrolyte balance of an already embarrassed system. Of course, it negates all attempts at therapy. It has been commonly noted that one must watch these patients very carefully when they eat, because they are known to hide food or to keep it in their mouths or even in their stomachs, and later regurgitate. In many attempts to evaluate therapy, this makes it extremely difficult to know what the patient is actually taking in.

Besides vomiting, hematemesis has been reported to be associated with the disease.[10] As mentioned, postprandial discomfort has been seen with or preceding anorexia. This often takes the form of epigastric pain or right lower quadrant pain. Many of these patients have been repeatedly operated on for appendicitis.[7, 19]

Although diarrhea and peristaltic unrest have been described,[16] the more usual case is severe constipation.[2, 15] This can be explained by lack of bulk and the greatly diminished thirst that is often noted. It can also be explained by the severe "gastrointestinal spasm" that occurs. Along with the diminished thirst is a markedly decreased urine output. But in some cases just the opposite picture is presented. One patient (case 5)[13] had a craving for fluid to the point of edema; another (case 2)[29] had such large water intake and such profuse urination that many were convinced that they were facing a case of diabetes insipidus.

Edema is often seen. This has been explained by a decreased serum albumin[10] and thrombus formation in the venous channels of the lower extremities.[6]

In some severe cases the patients have assumed a position in which the legs are flexed on the knees and the thighs are flexed on the trunk. Severe contractures have resulted as have severe bedsores.[16] Generalized skin disease has been seen. This has often taken the form of pellagra or brownish discoloration of the skin of the abdomen.[16, 19] Dry, scaly skin has often been seen. Cheilitis, glossy tongue, and gingivitis have been described.[2] However, there are remarkably few cases showing vitamin insufficiency considering the severe degree of emaciation.[13]

In many of the more severe cases neurologic signs of a generalized nature can be seen. Clow[16] has reported cases showing extreme delirium. Conybeare,[12] the great English clinician, has seen cases presenting with hysterical fits without loss of consciousness and also with carphologia.

LABORATORY STUDIES

A high grade of anemia is a common finding.[16] The blood cholesterol is usually normal. Ovarian hormone is absent. There is no ovarian atrophy noted, but a vaginal smear often shows atrophy. Signs of functional thyroid deficiency and indeed pluriglandular deficiency are often seen.[26]

Low basal metabolic rate may accompany but often follows the onset of the clinical picture. This is most usually in the range of from minus

20 to minus 40 per cent, although much lower values have been reported. In Berkman's series[19] 1 patient showed a basal metabolic rate of over zero, that is, in the plus range. Many of these patients have been diagnosed and treated as cases of hypothyroidism. The exact mechanism of the decreased basal metabolic rate is not clear. There have been many explanations and many disagreements. Some think that it is a conservation mechanism and that with associated factors, such as emaciation, aging, gonadal atrophy, caries, and splanchnomicria, it is due to starvation and acts as a protective mechanism. On the other hand, French[14] claimed that inanition does not cause a lowered BMR, and Berkman[19] believed that the depressed rate has no relationship with other symptoms and is probably psychoneurotic in origin.

Gastric hypoacidity has been shown to exist in 7 out of 20 (35 per cent) cases[7]; gastric anacidity was seen in 1 case (case 3).[10] The same authors have also shown that gastric emptying time is prolonged.

A flat, slow-rising glucose tolerance curve has been observed.[2, 10, 20, 34] As with the low BMR, many mechanisms have been suggested. Some have suggested that this shows a delay in handling water and glucose consistent with life on a lower level of activity.[10] In studies of carbohydrate metabolism in anorexia nervosa, Sheldon and Young[20] and Ross[24] pointed out that there is a rapid use of sugar with poor sugar absorption. Sheldon and Young believed this is due to previous overindulgence and a high carbohydrate diet and also pituitary dysfunction. They assumed that secondary failure of the adrenal cortex results (or relative failure), inhibiting phosphorylation, due to lack of adrenocortical hormones, upon which glucose absorption depends. But these same authors showed that the giving of adrenocortical hormones does not improve the glucose tolerance curve.

Other findings have shown that response to ACTH of urinary corticoid excretion is normal.[35] Therapeutic tests are probably not good for diagnostic purposes.[13] Some believe that there are other evidences of hypoadrenalism.[36] Clow[16] described X-ray evidence of calcium reabsorption.

POINTS IN DIAGNOSIS

Dunn[37] reported 2 fatal cases that were diagnosed as anorexia nervosa. At autopsy one showed typical changes seen in Simmond's disease in the pituitary and pancreas, and the other showed only macroscopic hemorrhage in both adrenals. He considered all of these conditions similar and believed that neurosis plays no part, that these are all a primary metabolic disease. Some differential points between Simmond's disease and anorexia nervosa are: Patients with Simmond's disease are rarely emaciated and rarely lose weight (Kyle[38]). The incidence of psychiatric disease in true Simmond's is hard to determine; the diagnosis of Simmond's disease should be reserved until neurosis is disproven. The diagnosis of Simmond's in a young female is tenuous. These are usually found after repeated pregnancies.[13] Some claim that the diagnosis of anorexia nervosa is one of exclusion. Table 1 shows several points of differentiation between Simmond's disease and anorexia nervosa.

TABLE 1

Differential Diagnosis of Anorexia Nervosa and Simmond's Disease

Finding	Anorexia Nervosa	Simmond's Disease
Sex incidence	Female 4:1	Female 2:1
Children	Usually have none	Multipara
Cause	Known causes	Known causes, i.e., multipara, infections, hemorrhage, etc.
Weight loss	Early	Terminal or rare
Hair	Hirsutism	Aging, falling, especially in axillae and pubis, with genital atrophy
Amenorrhea	53 to 86%	50%
Fatality	6%	100%
Energy	Increased	Decreased
Teeth	Good	Poor
Psychotherapy	May respond	Does not respond

SOME PSYCHIATRIC ASPECTS

Since the time of Morton many authors have been aware that psychologic factors enter into the etiology and symptom-complex of this disease, but only recently have there been more elaboration and investigation of its psychiatric aspects, description, classification, dynamics, and therapy. The American Psychiatric Association has recently classified this as a psychophysiologic gastrointestinal reaction.[39] Noyes,[40] McCarthy and Corrin[41] have also spoken of it in this manner. Strecker, Ebaugh and Ewalt[42] have classified it as a psychoneurosis, with its own separate heading. Yaskin and others[23] wondered whether this is part of a schizophrenic picture, a depressive picture, or a neurasthenic picture. Brill[43] claimed that many patients are schizoid-manic or mildly schizophrenic. There are a few reasons why psychophysiologic reaction might not be an adequate description. First of all, there seems to be a symbolic origin rather than a physiologic one of many of the signs and symptoms. Secondly, there seems to be too much apathy (*belle indifference*) to the symptoms of the disease. Thirdly, perhaps there are too many organs affected, and these at various times. One might note that Dejerine and Lasegue termed it a hysterical reaction. Because of involvement of autonomically controlled viscera, the structural changes that are produced, and the maintenance of deep-seated anxiety even in the face of outward apathy toward the symptoms, there are many arguments against the hysterical or conversion reaction terminology.

More recently, the work of Rahman, Richardson and Ripley,[44] Waller, Kaufman and Deutsch,[29] Palmer and Jones,[23] and DuBois[2] put forth the concept that we are dealing with a compulsion neurosis with cachexia as a major symptom. It is claimed that the syndrome involves, not a physiologic system, but rather a functionally coördinated unit, important to the patient, and perhaps, in a symbolic sense. Some describe it as an obsession with food, accompanied by a compulsion not to eat, rather than actual anorexia. Indeed, many of the secondary symptoms show compulsive characteristics such as increased fluid intake and obsessive cleansing; this probably has a symbolic basis. Such features as compulsive hand-washing, cleaning and neatness are common, both in this disease and in the obsessive-compulsive neuroses.[29] Many have considered features of a depressive psychosis to be present.[19, 29, 44]

Palmer and Jones[23] claimed that the cardinal features are the appearance of an illness due to emotional conflict or trauma, taking the form of a compulsive neurotic pattern. There is an intense repression of hostile impulses with self-punitive symptoms dominating. There is also an element of gratification in the symptoms. Insight cannot be present.

Some predisposing psychogenic factors mentioned are a history of shock, anxiety, or disappointment preceding the onset of symptoms.[7] Homesickness has been mentioned as a prominent feature.[8] Likewise, a difficult family situation, physical inferiority, and ambivalence and fright at marriage have been implicated.[13, 15] Perhaps the most commonly mentioned factors are familial stress on food, in the physiologic and symbolic sense, and preceding obesity. In many families the focus of life is on the feeding activities and the ceremony of eating.[13] One patient's symptoms began after the patient started to work in a bakery. Many patients have been obese and have been teased about this by their colleagues. Often a reducing diet is the beginning incentive, starting the whole process. There is frequently a distinct complex about being overweight. In the very process of reducing, acute emotional disturbances are often found. These can include depressive and anxiety symptoms.[45] But in the light of all these factors, one must conclude that the patient must have a vulnerable make-up and, more specifically, one vulnerable to the gastrointestinal tract and to the other parts of this disease.

Although in some families, paternal alcoholism, sibling psychosis, maternal psychosis, and an oedipal fixation on the father have been recorded,[10, 13, 29] the major interpersonal factor perhaps can be said to be mother-daughter tension in most cases. Langdon-Brown[22] stated that anorexia nervosa is on the increase, due to an increased frequency of mother-daughter tension. He also mentioned other factors, such as a prevailing fashionable fear of obesity and an also prevailing fear of going out into the world. Many patients have an unhappy home life, with spoiling and overindulgence by one parent, and hate and hostility directed toward the other parent. The hostility toward the mother is not always on the unconscious level,[29] although many patients do show a need for affection from the father and an unconscious rivalry with the mother. These mothers are often obese themselves and they are often strict disciplinarians about meals, having forced the patient from early childhood to eat everything. They are often the type of people who have taken out their aggressions directly on the patient, and, furthermore, the mothers themselves often react emotionally with minimal anorexia.

Besides the interpersonal family conflicts other dynamic factors have been investigated and noted. Among these are aggression and sexual conflict. Many of these patients have sexual problems of a neurotic character dating from a rebellion against sex at puberty, especially in the female, and guilt feelings about nocturnal emission in the male.[15] Many of these patients show a repugnance for coitus, but homosexual activity is usually not found. Often due to parental pressure, opportunity for normal adjustment at puberty is frustrated. Because of an excess of existing hostility within the family circle and the denial of normal channels for the reduction of this hostility, there is a revival of infantile conflicts with the parents and at the same time a recrudescence of old and regressive patterns of adjustment.[29]

Feeding, especially in the infant stage, is a complex phenomenon and has many symbolic repercussions. The infant uses acceptance or rejection of food to express an emotional pattern. It is indeed the infant's first meaningful emotional contact. It is the basis of an almost symbiotic relationship between mother and child. Later on food has more than only physiologic significance, and all these emotional relationships become tied up in the act of eating itself.[29, 46]

To young children and to primitive peoples eating and pregnancy are often tied up in one mental image. Perhaps this is due to the large abdomen that occurs with both events. It has been shown by many that there is a universal idea of oral impregnation held by children and primitive peoples. Kahn[47] pointed out that in the simple biologic sense food and sex are very similar.

When mothers of these patients consider sex dirty, gross and taboo, it is easy to see that, if in adolescence the person develops certain neurotic patterns, he can regress and revive fantasies of oral impregnation. Thus oral activity will take on sexual symbolism, and eating can symbolize impregnation. If a patient has an unconscious fantasy of becoming pregnant and a wish to become so, the wish can be symbolically gratified by gluttony and obesity. Some cases have in fact shown fantasies of oral impregnation on the conscious level. If, on the other hand, guilt and anxiety result from the fantasy, as they often do, the pregnancy wish is rejected unconsciously, and because of the association with food, food itself is thereby rejected. It can be rejected so violently that vomiting can, and does, result. Thus, one might see that the wish to become pregnant and the disgust at becoming pregnant are associated in the same psychodynamic complex. This is manifest symptomatologically by obesity followed by anorexia nervosa. Of course, both parts of the syndrome do not have to exist in the same patient, and due to guilt for other reasons or an immediate denial of the pregnancy fantasy, anorexia can result without preceding obesity. Anorexia then is formulated as an unconscious rejection of pregnancy fantasies.

Many of the symptoms can be explained symbolically on the basis of the above formulations by Waller, Kaufman and Deutsch.[29] In pregnancy the abdomen enlarges; similarly, constipation gives a sense of abdominal fullness, and thus it can symbolize the pregnancy wish or fear. Diarrhea, on the other hand, can symbolize rejection of the conceptus. Amenorrhea can be a denial of genital sexuality; it can also represent pregnancy fantasies, since cessation of menses is often the first sign of real pregnancy. Of course, amenorrhea can symbolize fear of pregnancy as well. In the general population temporary cessation of menses in young females fearing pregnancy is a common manifestation.

To summarize the above material, the patient with anorexia nervosa is often tense, hyperactive, alert and rigid and does things rapidly. She is usually of superior intelligence, drives herself hard, is ambitious, sensitive, and feels insecure. She has an immature, rigid, and severe superego. She is a perfectionist, neat, stubborn, meticulous, introverted, lacking in warmth, and often characterized by analysts as an anal-erotic personality. There is poor heterosexual adjustment and repugnance for coitus, and psychologic tests show neurotic anxiety associated with fear of sexual relationships and the opposite sex, in the social sense. This picture, together with recent descriptions of analytic findings, seems to indicate that one is dealing with an obsessive-compulsive personality, which, due to abnormal heterosexual adjustment, has regressed to more primitive fantasies of oral impregnation and associations of food and sex. This results in symbolic pregnancy wish or pregnancy fear, leading to compulsive eating or compulsive not eating (rather then actual anorexia).

Complications and Prognosis

Many of the cases seen are of a mild form; indeed, many are so minimal, or even subclinical, that diagnosis is not readily, if ever, made; some cases have been known to be fatal due to the anorexia nervosa itself or to a superimposed secondary disease. The extent of fatalities and the general prognosis vary in different series. Gull,[6] and others after him,[8, 10] pointed out that tuberculosis has often been superimposed upon anorexia nervosa. One factor to account for this is the severe malnutritional debilitation and cachexia seen in advanced cases. Of course, this might not be the only mechanism. The exact predisposing factors and susceptibility factors leading to tuberculosis are not yet fully clear. One may ask the question, "Does the endocrine status of the individual ever affect susceptibility to this disease, or to other infectious diseases?" Likewise, one may wonder whether the psychiatric character of the individual at a given time may change tissue susceptibility to infection via antibody production, response to stress by way of the cerebral hypothalamic pituitary adrenal axis, or by other unknown resistance factors. Also, factors of the psyche, one may suppose, have much to do with the total organismic response to any challenge, whether this be of a psychologic or physiologic nature. We glibly talk about host factors to disease, but what are they? We know that every individual reacts differently to an environmental or internal challenge. One must suppose that the varying responses of the individual to this challenge are all manifestations of the total organismic response. If one reviews the idea of the organism as a psychophysiologic unit, he can easily see that complex, interchanging, interrelated factors govern a total challenge response. A disease such as this enables one to see the functional and organismic, rather than the systemic, response to the challenge.

The effect of malnutrition can be seen by such things as death from scurvy in 1 case,[8] thyrotoxicosis, which Hertz and Means[48] believed can be precipitated by weight loss arising from voluntary restriction of food, and the decalcification of bone with fractures noted by Magendantz and Proger (case 3).[10] Richardson[13] pointed out that adrenal crisis can be precipitated by secondary adrenal insufficiency. Of course, this concept presupposes that a functional Simmond's pituitary cachexia exists. Conybeare[12] recorded a fatal case in which the only pathologic findings were a fibrinous pericarditis and multiple renal abscesses. It is interesting that Gull, in his first series, recorded 1 fatal case.

Many authors have emphasized the fact that early diagnosis and treatment are important, both for short-term cure, and, in fact, to prevent death. This is especially true if avitaminosis and signs of nutritional deficiency are found.[8, 10, 19] Dejerine[49] stated that a patient who loses more than half his body weight will never recover. He also claimed that no treatment will save the majority of these patients, and that recurrences will show a faster weight loss and a quicker progression of the disease. This might be due, according to Clow,[16] to the fact that the patient is getting too much secondary gain to ever become well. It is well known that among other psychogenic mechanisms and dynamic factors involved in this disease a secondary gain is often a prominent feature. On the other hand, some authors consider the prognosis indefinite,[10] while others have claimed that spontaneous recovery during the process of growing up, and severance of parental ties, is the usual rule. Ryle[8] reported full recovery in over 75 per cent of the cases, even though a course of months or years was necessary. In his psychotic group he reported a progression to starvation or death with or without pathologic complications in 8 per cent. DuBois[2] found 50 per cent improvement, and Ross found success in 16 of 19 (84 per cent) of his cases. Pardee[25] claimed that 80 to 90 per cent will recover, and that death is rare. He thought that this type of starvation is not as severe as true psychotic starvation. Amenorrhea has been considered by some to be the last symptom to disappear, and the best criterion of cure.[8]

Some Aspects of Management

Many authorities agree on a few points: 1. The patient should be immediately separated from his family, friends and home. One author[6] stated that "Relations and friends are the worst attendants" (see also references 7, 31 and 8). 2. The patient should be immediately hospitalized for full control. 3. The patient should be immediately put to bed, warmth and body heat considered of the utmost importance. 4. Good nursing care is essential. After this point agreement on management is minimal. Management might be divided into 2 phases, the first being symptomatic and the second being curative. Of course, if one is presented with a cachectic patient, the basic etiologic mechanisms cannot be attacked until the patient's strength will face them. Thus, treatment of malnutrition must be first and foremost. Some authors stop at the symptomatic phase. For example, Allison and Davies[7] treated only the symptoms themselves. Others treated the symptoms but also attempted to go deeper. This can be done after malnutrition is corrected, or while that is going on.

Many plans of treatment revolve about food and the reëstablishment of normal caloric intake. Gull[6] used forced feedings; others[13, 19] used tubal feeding when necessary, but felt safer if this were done under psychiatric care. On the other hand, it has been claimed that forced feedings should not be used, and might, in fact, be dangerous, because attempts to break down a neurotic mechanism by force are not without great risk.[13] Ross[11] used liver extract (Campolon) with a high carbohydrate diet, but Gillespie[50] pointed out that insistence upon all food being eaten is more important than more elaborate diets. It is important not to overfeed, and food with little bulk and high metabolic value should be used. Foods of high fat content have the best value, since 1 Gm. of fat equals 9 calories, while 1 Gm. of protein or carbohydrate equals only 4 calories. Other measures include gastric lavage to combat slow gastric emptying time and thus to prepare the stomach for the next meal. Periodic fasts have been found valuable. One patient (case 14) gained 9 pounds in 1 month on this regimen.[7]

Next to the diet many different mixtures have been used. These include cinchona, bichloride of mercury,[6] Martin's mixture of cornflower, milk and lactose; also, plain orange, barley water with glucose and lemon juice added; and other bitter tonics and acids, including gentian violet and strychnine with dilute hydrochloric acid.[7] The third measure commonly tried was the use of endocrine supplements. Berkman[19] mentioned intravenous glucose and water, with injections of epinephrine to combat hypoglycemia, but he did not believe in this method of treatment. Insulin has been used often as a stimulant of appetite. Opinions as to its efficacy vary. Some have pointed out that it increases appetite but does not aid the basic condition and can, in fact, cause more marked hypoglycemia.[13] Others[7] have stated that insulin gives poor results, while still others have thought that it is safe and often helpful, even to the extent of using insulin shock.[2, 10] Various thyroid preparations have also been used, some with favorable results[19] and others with harmful results and greater weight loss. This is often given to correct the low BMR, but it should be evident that the BMR is not the disease being treated but only a manifestation of that condition. In emaciated patients it is not good to increase metabolism artificially unless dietary intake is also increased. Anterior pituitary extracts have had little or no effect even though some investigators have implanted pituitary tissue into the omentum.[10, 13] Combinations of thyroid, insulin, and ovarian hormone have also been found to be of little if any value.[8]

Even psychiatric treatment is extremely varied. One author[31] attempted suggestion and persuasion, believing that analysis and psychotherapy, except in the most superficial sense, is excluded by the need for fast results. For the disease to be cured, the basic neurotic mechanisms causing it must be treated. This has varied from successful superficial psychotherapy without frontal attack[23] to direct frontal explanation[8] to hypnotism.[31] Certain authors [7, 8, 15, 56] believe in psychotherapy but no psychoanalysis, since the cause is supposedly at the surface and deep motive inquiry should be avoided, at least until after food is being taken normally, while Brill[43] and Pardee[26] treated by deep analysis.

SUMMARY

A review of a definite clinical entity has been made. The exact nature and management have been disputed as shown by the wide range of opinions found in the literature. Recent psychiatric investigation has begun to outline the dynamics and other factors involved. Future work along this line and also attempts to relate psychogenic and physiologic mechanisms will be valuable. This is not a condition limited to any particular physiologic or functional system but is seemingly a total organismic response to a challenge.

ACKNOWLEDGMENT: The author wishes to thank his wife, Susan Cole, and Dr. Robert P. Nenno, Assistant Professor of Psychiatry, Georgetown University School of Medicine, for their kind help in the preparation of this paper.

BIBLIOGRAPHY

1. SARGANT, W., AND MACLAY, W. S.: Lancet, 1937, **1**, 474.
2. DUBOIS, F. S.: Am. J. Psychiat., 1949, **106**, 107.
3. MORTON, R., cited by Magendantz, H., and Proger, S.: See ref. 10.
4. MORTON, R., cited by Ross, C. W.: See ref. 11.
5. GULL, W. W.: Lancet, 1868, **2**, 171.
6. GULL, W. W.: Tr. Clin. Soc. Lond., 1874, **7**, 22.
7. ALLISON, R. S., AND DAVIES, R. P.: Lancet, 1931, **1**, 902.
8. RYLE, J. A.: Ibid., 1936, **2**, 893.
9. ZONDEK AND KOEHLER, cited by Magendantz, H., and Proger, S.: See ref. 10.
10. MAGENDANTZ, H., AND PROGER, S.: J.A.M.A., 1940, **114**, 1973.
11. ROSS, C. W.: Lancet, 1938, **1**, 1041.
12. CONYBEARE, J. J.: Guy's Hosp. Rep., 1930, **80**, 30.
13. RICHARDSON, H. B.: A.M.A. Arch. Int. Med., 1939, **63**, 1.
14. FRENCH, H. T., cited by Clow, F. E.: See ref. 16.
15. VENABLES, J. F.: Guy's Hosp. Rep., 1930, **80**, 213.
16. CLOW, F. E.: New England J. Med., 1932, **207**, 613.
17. BROBECK, J. R.: Ann. New York Acad. Sc., 1955, **63**, 44.
18. FULTON, J. F.: Physiology of the Nervous System, 3rd ed. New York: Oxford, 1951.
19. BERKMAN, J. M.: Am. J. M. Sc., 1930, **180**, 411.
20. SHELDON, J. H., AND YOUNG, F.: Lancet, 1938, **1**, 257.
21. SHELDON, J. H.: Ibid., 1937, **1**, 369.
22. LANGDON-BROWN, W.: Ibid., 1937, **1**, 473.
23. PALMER, H. D., AND JONES, M. S.: A.M.A. Arch. Neurol. & Psychiat., 1939, **41**, 856.
24. ROSS, C. W.: Lancet, 1938, **1**, 347.
25. PARDEE, I.: A.M.A. Arch. Neurol. & Psychiat., 1939, **41**, 841.

(Continued on page 650)

HEART DISEASE IN CHILDREN*

JOHN O. NESTOR, M.D.
Associate Attending Cardiologist, Children's Hospital, Washington

E. CLARENCE RICE, M.D., F.A.C.P.
Director of Laboratories, Children's Hospital

IN AN EFFORT to evaluate the importance and the magnitude of the problem of heart disease in children at Children's Hospital all autopsy protocols for the past 6 years (1950 through 1955) were reviewed. Only those patients who died of heart disease or in whom heart disease was a major contributing factor in their deaths were included in this study. Those in whom relatively minor and insignificant cardiac defects such as a small patent foramen ovale or a probe-patent ductus arteriosus were found were not included.

During this 6-year period there were 56,621 hospital admissions and 837 deaths, with 675, or 81 per cent, coming to necropsy. One hundred thirty-five (135) or 20 per cent of those who came to direct examination had significant cardiac lesions (table 1). Four of these patients were dead on arrival at the Hospital and are not included as hospital admissions. Each of these had a different congenital anomaly including a tetralogy of Fallot, a pseudotruncus arteriosus, a transposition of the great vessels, and idiopathic cardiac hypertrophy.

TABLE 1

Hospital Statistics

Year	Admissions	Deaths	Necropsies	Heart Disease
1950	9,231	129	112	21
1951	9,786	138	106	22
1952	9,761	158	125	23
1953	9,456	139	112	27
1954	8,993	132	100	25
1955	9,394	141	120	17
TOTAL	56,621	837	675	135

Approximately two-thirds (65 per cent) of the deaths associated with significant heart disease occurred in children under 1 year of age, with the incidence of death decreasing gradually during subsequent years (table 2).

TABLE 2

Age at Death

Age in Years	0–1	1–2	2–3	3–4	4–5	5–6	6–7	7–14
Patients	88	15	8	6	4	3	3	8

About twice as many white children died of heart disease as colored children, and more males than females. No conclusion can be drawn from these facts, for it was impossible to correlate them with statistics concerning hospital admissions and outpatient visits since these are selected groups and are not necessarily representative of the general population.

Congenital heart disease was by far the most common etiologic type in this series, and it is interesting that there were so many deaths from this cause and so few were due to rheumatic heart disease (table 3). Part of this difference may be explained by the fact that many of our patients with rheumatic fever have been transferred to the Crippled Children's Unit at the District of Columbia General Hospital and subsequently followed there. It is possible that much of the decreased morbidity and mortality which has been noted during the past half-century and which has been accelerated during the past 10 years may be the result of better housing, better nutrition, and the use of antibiotics in the treatment of respiratory infections.

---

* The investigation here reported was supported in part by Research Grant H-1762 from the National Heart Institute of the National Institutes of Health, Public Health Service, United States Department of Health, Education and Welfare.

The 10 patients with endocardial fibroelastosis were not included in the group with congenital malformations, since the etiology of this condition is unknown and may eventually be proved not to be due to a congenital defect.

TABLE 3

Etiology

Types	Number
Congenital malformations	102
Endocardial fibroelastosis	10
Nephritis	5
Interstitial myocarditis	5
Rheumatic heart disease	4
Cor pulmonale	
Acute	2
Chronic	1
Idiopathic hypertrophy	2
Coronary arteriosclerosis	2
Paroxysmal tachycardia	1
Lipochondrodystrophy	1
TOTAL	135

Cor pulmonale is becoming increasingly important as a cause of heart failure in children. The patient with chronic cor pulmonale was a 14-year-old girl with essential pulmonary hypertension. The 2 with acute cor pulmonale were small children with bronchiolitis and pneumonia. Although no children with mucoviscidosis were found in this series, more than 10 per cent of the children with this disease now live long enough to die of chronic cor pulmonale.

Arteriosclerotic heart disease is uncommon in children, and it was unusual to have 2 such patients die within a few months of each other. One was a 7-week-old white girl with generalized medial sclerosis of the arterioles showing calcified plaques. The other was a 22-month-old colored girl with marked narrowing and calcification of the left coronary artery.

So-called idiopathic hypertrophy as a cause of death in children is encountered with decreasing frequency as our ability to recognize pathologic factors, such as endocardial fibroelastosis and interstitial myocarditis, increases at postmortem examination.

Nine of the children who died with congenital malformations of the heart had associated mongolism. Four of these had common atrioventricular valves, 3 had atrial septal defects, 1 had a tetralogy of Fallot, and 1 had a dextrocardia.

CONCLUSION

These statistics would seem to indicate that the reduction in the incidence of deaths from infection has resulted in an apparent but relative increase in the incidence of deaths from heart disease in children. The relative incidence and importance of congenital heart disease and rheumatic heart disease as a cause of death have been altered during the past several years. The recognition of additional etiologic and pathologic factors in cardiac disease has served to increase the physician's ability to correctly diagnose and as a result has increased the importance of pediatric cardiology.

President's Page

MEDICAL SERVICE AND OUR DOCTORS

There is much current discussion among our doctors relative to the extension of our Blue Shield Plan to include service benefits for medical care. This discussion is at times heated, which is perfectly natural, because it involves the services of internists and general practitioners, who up to this time have not participated in the Service.

Perturbed, because the reported fees to be paid by the Service were in their opinion inadequate, internists have organized to assure members of their group adequate compensation. Conferences between them and officials of the Service have been in progress for some months. It is expected that a mutually satisfactory agreement will be reached in the near future. Internists, however, are not the only participants in the Plan concerned about fees. Many surgeons too feel that the fees now paid them by the Service are inadequate.

Reports which I have received about the above development have led me to conclude that I should offer my observations in this matter. Let me say that I am not too perturbed about criticism of the Service by our members. I am, however, concerned about the indications that among some of them there is evidence of waning confidence in the Plan. This has prompted the comments which follow.

Officers of Medical Service are a hard-working, diligent group and, of course, much better informed as to the mechanics of the Service's operations than are most of the Participating Physicians. In spite of the fact that their services are given gratuitously and they are under no obligation to continue what at times is a disagreeable assignment, they seem to accept the various crises that arise in a philosophical fashion. Both officers and informed Participating Physicians, of course, realize that Medical Service cannot remain static, that it must be dynamic, prepared to meet the competition of the commercial insurance carriers and the demands of the subscribers and the Participating Physicians. One can sense a certain degree of complacency in Blue Shield, due primarily to its phenomenal success in enrolling almost astronomical numbers of subscribers. This should not obtain.

Our members, who are apt to be too critical, must remember that Medical Service is not just another insurance company, but is the doctors' plan for the District of Columbia. It came into being after months of labor and careful consideration by the Society's membership. It was made clear at the time the Plan was approved that its purpose was to meet the medical needs and demands of the low- and average-income groups; that physicians would receive somewhat less compensation for services to subscribers than ordinarily. It must have been clear then, as it is now, that the Service would inevitably reveal deficiencies which would be difficult to overcome.

The Service has now been in operation for ten years, and with all its imperfections it has, in my opinion, lived up to the high hopes our leaders held for it in the beginning. Many of the defects that have cropped up from time to time have been remedied; others are still in need of attention.

The Board of Trustees of the Service is not unaware of the shortcomings that still exist and hopes to deal with them as soon as conditions permit. It should be pointed out that no one believes, least of all the Board, that imperfections in the Plan will ever be completely eradicated.

We must accept the fact that some form of voluntary health insurance is here to stay. The American people want it regardless of income levels, and if we, as physicians, do not provide it with our Plan, it will become available to them through commercial insurance carriers, which Blue Shield has stimulated to such active competition. The competition of commercial insurance carriers is good, although this type of insurance leaves much to be desired by us as physicians for a number of reasons.

I believe that Blue Shield as represented by Medical Service is the only effective means of assuring the medical profession of the District of Columbia that it will have a voice in its own destiny. In these circumstances we as physicians should make every effort to see to it that the Service operates in the best interests of the public and the medical profession.

Ralph M. Caulk

Editorials

WHAT THEY READ TOMORROW

Every once in a while, the American Medical Association receives a letter from an irate physician complaining about an article in a national magazine. "This sort of information should not appear in print," he'll say. "Why doesn't the American Medical Association do something about it!"

Neither the AMA, nor any other organization, of course, can tell a magazine what to publish. As the medical profession believes in free enterprise, magazine editors believe in freedom of the press. But the American Medical Association is doing something about the problem of magazine relations. Several years ago, active, positive steps were taken that just now are bearing fruit.

As recently as 1950, some magazine editors hesitated before requesting information from the AMA. It was easier going to governmental agencies or voluntary health organizations for help on medical or health articles.

To remedy this situation, the American Medical Association's Public Relations Department set up a special magazine division—charged with the job of helping magazine writers and editors with articles about medicine or health.

Very carefully, friends were made in the magazine field. Editors of mass circulation magazines were visited by a representative of the AMA; free-lance writers specializing in medical articles were sought out.

Little by little the word got around of the new "open door" policy. The medical profession was willing and able to help with popular articles about doctors, about medical advances, or about health subjects in general.

The AMA service to magazine writers was three-fold: It would assist in digging up source material; it would suggest experts in a given field who could provide additional information; it would review completed manuscripts for factual errors.

And the service took hold. Requests for assistance came pouring into AMA headquarters—173 in 1955 alone. Writers telephoned for background data; others spent days with staff representatives talking over story possibilities.

One prominent free-lance author wrote: "I am hurrying to thank you for all the assistance . . . the speed and thoroughness with which you got me data, I might add, probably are among the factors that will persuade me to do more in this field."

The American Medical Association's approach to magazine relations is a positive one. Once an article critical of medicine or containing misinformation appears, the damage is done. A vitriolic letter to the editor or a "poor mouth" attitude merely results in strained relationships between the editor, the writer, and the medical profession.

On the other hand, a long-range, running friendship pays off manifold. At the present time the American Medical Association has a personal contact in the editorial office of every mass circulation magazine. More and more frequently, these editors and writers ask the medical profession for help and check statements or finished manuscripts with the AMA. When an error does occur, or a question arises, a friendly phone call receives more attention than a cold letter written in anger.

Without a doubt, articles containing misstate-

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.

ments of fact or information the medical profession would rather not see in print will continue to appear in popular magazines. Editors and writers are human—and they are independent thinkers.

But the important thing is that the number of such articles is decreasing. In a tabulation kept by the AMA, 387 articles on medical or health subjects appeared during a 12-month period in magazines with more than 1,000,000 circulation. Only 9 of those articles could be construed in any way as detrimental to the medical profession.

In the American Medical Association's long-range public relations program what the general public reads tomorrow about medicine is far more important than what they read yesterday.

Stephen T. Donohue
Assistant Director, Department of Public Relations, American Medical Association

THE HOSPITAL COUNCIL

On matters which require unity of action, Washington Metropolitan Area hospitals are represented by the Hospital Council. The functions of the Council are many and varied, and the services it performs are constantly being expanded to meet the needs of the ever-growing hospital field. Although originally organized as a sort of informal forum through which administrators could meet and discuss mutual problems, over the past 8 years the Hospital Council has become a clearing house of information and has provided a much needed unified representation in dealing with local government and community health organizations.

Hospitalization in the Washington Metropolitan Area has been estimated to rank as the fifth largest industry in terms of capital investment, annual operating expenses, and size of payroll. Current replacement value of existing facilities approximates the 100-million-dollar mark; operating expenses last year approximated some $25,000,000; and payroll for the same period totaled about $15,000,000.

Hospital operations have many characteristics which set them apart from commercial enterprises. Hospitals, in general, may be said to be voluntary, nonprofit, community ventures organized to help serve the medical needs of the public. In the past, funds to build, expand, and operate these institutions have come from the public itself through the media of voluntary philanthropic donations and governmental allocation of tax monies. Now with charitable contributions practically nil, operating expenses must come from the patients who receive the services.

As a result of increased scope and size of area hospital operations and the complex problems peculiar to this large community service, hospital officials have felt a need to discuss common problems with others in the field. The organization of the Council in 1948 represented an effort to cope with mutual problems. The objective of the Council, in broad terms, is to serve as a coördinating center of hospital activities. It further acts as an agent for its membership in dealing with third-party purchasers of hospital care, as a research center in analyzing significant economic trends, as an organizer of educational conferences, and as an advisor on salaries, charges and daily administrative policies and procedures. In some respects it serves its membership as a trade organization, constantly keeping tab on local and national developments of interest to hospital officials.

There are now 17 institutions which make up the membership of the Council. Hospitals are represented on the Board of Directors by their own Presidents and by three Administrators, who are elected to serve a one-year term by vote of an Administrators Section of the Council. No administrative or financial control is exerted over the membership, and the Council is entirely supported by dues paid by participating hospitals.

Under the able leadership of its Presidents, William R. Castle, Walter N. Tobriner, and H. Gabriel Murphy, and currently, Justin D. Bowersock, outstanding community-minded Hospital officials, the Council has developed into an effective representative of the area hospitals. One of the most important functions of the Hospital Council is its role in the development of the District of Columbia medical charities program. For many years the reimbursement paid to hospitals by the local government in connection with medical treatment provided to certified indigent patients has borne no relation to actual costs incurred by these institutions. Appropriations, eligibility standards, and detailed administrative procedures have not kept pace with the rapid growth of the medical and hospital needs of the indigent portion of the population. With the ever-increasing costs of operation and the advent of many new, costly, and complex medical procedures hospitals have had to reëvaluate their participation in the medical charities program in the light of their individual financial conditions.

By working closely with the District of Columbia Health Department officials, the Council, with the help of members of the Medical Society, has sought to negotiate a more equitable program arrangement which would work less of a financial burden on participating hospitals, and thus less of a burden on the patient who pays his own bill as well as a portion of the deficit incurred by the care of indigent patients. In addition, appeals have been made directly to Congressional committees and to the District Commissioners to secure increased appropriations. Since 1952 annual program appropriations have increased an average of some $100,000 per year. Although reimbursement still falls 40 per cent short of meeting actual costs of rendering care to indigent patients, the fact that government officials have been made aware of this deficiency holds out some hope that future reimbursement will some day be based on actual cost.

One of the newest functions of the Hospital Council is its assumption of responsibility with respect to the Washington Community Chest, United Community Services Hospitalization Fund. This Fund, administered by the Hospital Service Agency under an agreement with the Council, provides financial aid to the individual who is in need of medical care but is unable to pay for it, yet is ineligible to receive financial assistance from any other source. The acceptance of this responsibility by the Council has enabled the hospitals as providers of service to deal directly with Community Chest as the provider of funds.

In regard to the growing trend toward prepayment of hospitalization expenses through commercial insurance and Group Hospitalization, Inc., the Council serves its membership in an agency relationship. Development of uniform admissions procedures, coördination of negotiations and planning, as well as serving as a buffer for complaints, are a few of the detailed areas of Council responsibility.

There have been instances where third-party agencies have attempted to dictate to hospitals how to operate by paying arbitrary rates rather than the full costs of care. In such matters the Council performs an educational and advisory service pointing up to such agencies the philosophy behind the voluntary, nonprofit, community hospital system and that the survival of this system is dependent upon fully equitable financial arrangements.

The ultimate goal of all Council operations is better patient care to be achieved through enlightened and coördinated activities of its membership. This goal can only be realized when the public and the government accept their mutual responsibilities for care of the sick as a community effort. The Council looks forward to the opportunity of providing better service to its membership in terms of this goal.

William M. Bucher
Executive Director, Hospital Council of the National Capital Area, Inc.

SUMMER STUDENTS

More and more medical students are spending their summer months studying under fellowships at medical institutions in the larger cities of the United States. Some of the organizations which make possible these courses of study have been reported in the MEDICAL ANNALS, but rarely do editors receive an evaluation of the projects from the students themselves. Physicians may be interested in learning what some of these students accomplish, or at least what they are exposed to.

Three students from the District of Columbia, representing each of the medical schools, were enrolled for study this past summer at Memorial Hospital for Cancer and Allied Diseases in New York, under fellowships made available by the American Cancer Society, and with some additional personal expense money from the District of Columbia Chapter. An interesting "preliminary report" from Miss Randi V. Rosvoll, a student at George Washington University, was passed on to the Editor by Mr. Joseph W. Leverenz, Executive Director of the District Chapter. Because the letter is quite informative, it is quoted almost in its entirety.

"As you know, I am at present on the Head and Neck Service, where I will spend a total of 4 weeks. So far, I have tried to divide my time equally between the work on the ward and in the operating rooms, and in the clinics. I feel that this will give me the broadest possible view of the work that is being done on my service.

"Two mornings a week I attend the new patient clinic, where, with an attending surgeon, I have a chance to examine the patients, ask any questions I like.

"The Head and Neck conferences are held twice weekly. Here I again see the new patients, and hear all the 'pros' and 'cons' regarding management of their disease.

"When a patient is admitted I again have a chance to talk to him and examine him (this time on my own), and when he is scheduled for surgery I 'scrub in.'

"At 7 a.m. each day I see the postoperative patients—and then there is the follow-up clinic, where again, with an attending surgeon, I see the results of their treatment.

"So far I have assisted at 13 operations ranging from simple excisions to quite radical procedures.

"Each day at 4 p.m. we have a lecture or discussion period by various physicians—a total of 30 lectures covering a variety of subjects related to cancer. Today, for example, Dr. B. Miller of the American Cancer Society talked to us on the history and functions of the Society. Also each day, at 5 p.m., we attend a session held by the department of physiology, where various medical problems, mainly those of electrolyte balance, are discussed. We are welcome to attend any of the conferences, and have access to all charts in the hospital; so, as you see, the sources are unlimited. Too bad time is limited.

"I spend a busy day, 7 a.m. to 9 p.m., usually in the hospital, with breaks for lunch and dinner. I find the attending physicians and residents more than willing to answer any questions.

"Right now I cannot exactly evaluate what I have learned, but I certainly will feel more competent in my diagnosis of cancer, having seen so much of it already. Also, I am learning much about handling cancer patients (and their families, I might add), and maybe most valuable of all, I have learned that one never gives up in treating cancer.

"I hope this will give you some idea of the validity of our clinical clerkship. The month of August I will be on medicine and the screening outpatient clinic; when I finish I will be able to give you a full report.

"As an addition to my report I might add that our living quarters are excellent.

"I am enjoying my stay in New York very much, and I highly recommend that this student fellowship program be continued."

Mr. Charles A. Payne, a student at Georgetown University School of Medicine, also wrote an appreciative letter to Mr. Leverenz. He mentioned particularly the knowledge gained in history-taking and physical examination. It is quite evident from both the letters that these students made good use of their stay at Memorial Hospital.

Thirty medical and 2 dental students from the District of Columbia, Virginia, and Maryland took advantage of the annual summer student training program provided by the United States Public Health Service. They constituted almost half of the total group of 77 medical and dental students selected by the Service from 23 approved professional schools in the United States.

The purpose of the PHS summer employment program is fourfold:

1. To stimulate the interest of promising students in careers in the Public Health Service.
2. To enable students to further their professional knowledge while being gainfully employed.
3. To give students an opportunity to increase their understanding of and interest in the functions of Government and independent Public Health agencies.
4. To provide the Service with competent help during the summer months.

The laboratory assignments were carried out at the National Institutes of Health in Bethesda and at the Communicable Disease Center in Atlanta, Ga. Hospitals and other facilities of PHS were used for clinical clerkships. A considerable number of students were assigned for hospital and field duty at Indian Hospitals in Arizona, Minnesota, Montana, Nebraska, New Mexico, and South Dakota. With the exception of 2, all the students from the District of Columbia and the two adjacent states were assigned to the National Institutes of Health in Bethesda. George Washington University was represented in the entire program by 15 students (of whom 8 were from D. C., 2 from Virginia, 1 from Maryland) and Howard University by 7 (including 1 from Washington and 1 from Takoma Park, Md.).

A.L.E.

In and Out of Focus

BY THE OBSERVER

Rating: Lower Half Many Washingtonians had their first opportunity to see and hear the recently appointed Surgeon General of the Public Health Service, Dr. Leroy E. Burney, when he appeared on television a month or so ago. Those with whom your Observer talked shortly after the telecast agreed that he made a fine impression. He was pleasant, but not ingratiating, forthright but weighed his words carefully in replying to the questions put to him by the panel of newspaper reporters, Nate Haseltine of the *Washington Post and Times Herald*, Charles Brooks of the *Washington Star*, and Steve Cushing of the *Daily News*.

Of special interest to Washington viewers were Dr. Burney's views on the District's Health Department. What Dr. Burney said, in essence, was that the Department fell far short of the standards attained in communities with comparable health problems. When pressed to be specific he said it could not be considered in the upper third and, most likely, not in the upper half, among state and territorial health departments. He made it clear that he was not finding fault with Dr. Daniel L. Seckinger, Director of Health, or any other individual in the Health Department. He expressed the opinion that the situation was largely due to the lack of funds and community interest. Commenting on Dr. Seckinger's resignation, he warned that an adequately qualified successor could not be obtained for the salary now being paid.

At its meeting on September 24, the Society's Executive Board took cognizance of Dr. Burney's remarks in a statement released to the press the following day. Speaking for the Board, Dr. Wallace M. Yater, its Chairman, said that Dr. Burney's views "underscore what spokesmen for the District Medical Society have been saying for many years; that our Health Department falls far short of being a model for the Nation. Nevertheless, Dr. Burney's statement that the Department is not in the upper third, and most likely not in the upper half, among the health departments in the states and territories of the United States is shocking. Of all places, the Nation's Capital should be an example for the rest of the country."

"The Board agrees," Dr. Yater continued, "that there is no single individual responsible for the present situation; nevertheless, now, when a change of administration of the Health Department is about to take place, is an opportune time to give the incoming Director of Health an opportunity to build on a sound and firm foundation. This will require sufficient funds and the authority to reorganize the Department as the Director thinks best.

"Doctors, individually and collectively, have a deep interest in the Health Department because of their intimate concern with its operation and their participation in its various activities. They stand ready to coöperate with the Commissioners and with the new Director of Health to bring the Department of Health up to the high standards the community has a right to expect."

Not mentioned in the release was the Board's offer of assistance to Commissioner David B. Karrick in selecting a new Director of Health to succeed Dr. Seckinger. A cordial reply was received from the Commissioner, but at the time this was written (mid-October) the Society's offer had not been taken advantage of.

As stated by Dr. Yater, our Society is vitally interested in the Health Department and how it functions. After all, the primary objective of the Society and the Department is the same—maintenance of the people's health. Although the Department's effectiveness depends largely on the qualifications and ability of its Director of Health, a close and satisfactory relationship with the medical profession is vital; each needs and must have the coöperation of the other if the people of Washington are to receive the best that medicine has to offer. The people of the District of Columbia can count on the Medical Society, as always, to do its part.

★

"Visiting Firemen"

There will always be differences in opinion among physicians as to what constitutes a good scientific program. Anyone who has served on a program committee will vouch for the fact that even here there is seldom unanimous agreement on the subject matter to be presented and the manner of its presentation.

Physicians are, perhaps, more sharply divided as to the desirability of inviting outside speakers, often called "visiting firemen," rather than local talent in an effort to bolster attendance. This has been the subject of discussions by various committees charged with planning programs for the Society's ANNUAL SCIENTIFIC ASSEMBLY. With few exceptions they have come to the conclusion that "visiting firemen" have a pulling power that even their far better equipped local colleagues cannot match. Dissenters have insisted that this has not been conclusively proven. Washington, they say, has grown rapidly in the last two decades as a major medical center, and as fine talent is to be found here as in any large city in the country.

A compromise was reached locally some years ago when it was informally agreed that a majority of the speakers on the ANNUAL SCIENTIFIC ASSEMBLY program should be "visiting firemen" but that programs of the more recently inaugurated MIDWINTER SEMINAR be presented by District physicians.

On the whole, this arrangement seems to have worked out very well. At least for the past two or three years both meetings have been very well attended. Those who planned the SEMINARS have found it advantageous to use one or two "visiting firemen" during the three evening sessions but, generally speaking, the speakers are confined to local talent.

Now this is not a problem peculiar to Washington; it exists in every community. This is emphasized by the reports heard at national meetings and the valiant efforts being made these days to attract large enough attendance at medical meetings to warrant the effort that goes into them.

In the September, 1956, issue of the *Wisconsin Medical Journal* there appears a report on a survey of the members of the State Medical Society to ascertain what their views were with respect to that organization's annual meeting. Out of 3,249 members, 1,200 returned questionnaires sent them. The *Journal* states that a quick run-down of the questionnaires reveals contrasting points of view. Here are samples of predominant comments:

> "Use more outside speakers—Use more in-state speakers."
>
> "Material too basic—Get down to fundamentals."
>
> "Have more specialty lectures—Put on more for the generalist."

The *Journal* doesn't state how the vote was on each of the above but deduces that "it is almost impossible to produce a program to please everyone." It seems to your Observer that in not being more specific as to the number or percentage who took opposing views, the *Journal* left its readers in the dark as to where the majority stood. Perhaps it was thought best to avoid controversy. If not, it must have been a toss-up.

Although our Medical Society ranks as a state medical society, it possesses many characteristics of a large metropolitan county medical organization. It is natural in these circumstances that its program problems differ somewhat from those of other state medical societies. First of all, its jurisdiction is limited to a small, highly congested area, which, it happens, is the Nation's Capital. Within and just outside its borders are large governmental medical institutions and three medical schools, staffed by a considerable number of internationally known physicians. With few exceptions, these have been heard many times by the approximately 1,800 practicing physicians in the District of Columbia on subjects on which they are expert. It is not surprising, then, that many of their colleagues are not attracted by programs on which these physicians appear unless the subject matter is of an unusually challenging nature.

The most satisfactory rostrum for these speakers at the present time, except for the previously mentioned MIDWINTER SEMINAR and, to a lesser degree, the ANNUAL SCIENTIFIC ASSEMBLY, is supplied by some 30 or more special societies in Washington which attract large numbers of physicians because they combine social with scientific features. There is an intimacy about them which, of course, does not exist in a major medical organization.

Contrast this situation with that which exists in states where the physicians must travel long distances to attend the annual meetings of their state medical societies. They have few occasions to hear the physicians located in their states and so one is not surprised that they attract sizable audiences. Nevertheless, by thumbing through the issues of state medical journals, one notes that even these organizations rely to a considerable extent on the lure of "big names." So it would appear that the difference between the District and other state societies on this score is not as great as it appears to be on the surface.

What it comes down to is this: Physicians, whether they are situated in urban or rural areas, like other people, want to see and hear those supposedly at the pinnacle of their profession. It appears that this desire will be gratified to a greater extent in the future than in the past with the growing popularity of the closed-circuit television programs which place much emphasis on "all-star casts."

A Quieter City

District residents may rail at their political impotence and the frustrations which are inherent in a voteless community, but they also have much to be thankful for. It is generally conceded that there is no more beautiful city in the world than the Nation's Capital with its unmatched park system, its historic buildings, and its tree-lined avenues. Certainly, even the most myopic must agree that these are assets of which few large cities can boast.

Washington possesses another virtue which is seldom mentioned, its noiselessness as compared to other large metropolitan centers. There are, of course, still the hair-triggered autoists who like to lean on their horns and the ambulances which, unnecessarily, shriek their warnings to other vehicles and pedestrians. Mr. George E. Keneipp, Director of Vehicles and Traffic for the District of Columbia, reminded your Observer of this when informed that these comments were being prepared. However, these are minor noises when compared with the clamor one finds in the downtown areas of New York, Chicago, Philadelphia, and other large cities.

The Medical Society building, as all members know, is located on M Street, near Connecticut Avenue, Northwest. Your Observer, whose office is just off the street, was thinking as he wrote these lines how free from outside noises his office is. They are usually so insignificant that he is seldom conscious of them. It is true that M Street is not a principal artery; nevertheless, it is in the downtown area and there is usually a constant stream of traffic along it during working hours.

What prompted these observations was an editorial that appeared in the September 14, 1956 issue of *Philadelphia Medicine*. Author of the editorial is Dr. Hugh Robertson, who gave it the title "A Quiet Week at Home." Dr. Robertson had just returned from a vacation at Cape Cod Bay when he learned that the following week, by Mayoral proclamation, was to be "Quiet Week" in Philadelphia.

Dr. Robertson writes that "a 'quiet week' in a big city just can't be, but a person can dream." He would welcome a change for the better as much as anyone but warns that noises are a relative thing.

> "There is a great difference between stillness and quiet. The stillness after Appomatox was a frightening thing. It is said that the hushed silence of the Burmese rain forest drove the white Briton insane in seven years The city dweller writhes in agony at the five-o'clock barnyard serenade; the farmer is miserable with city noises when he tries to sleep in a big city hotel. Elvis Presley drives parents to drink while youngsters study algebra. Those who live next to the elevated lines toss and turn at the racket of crickets and katydids. Apparently background noise is a necessary part of modern living.
>
> "But there is a great difference between background noise and the crashing jangle of the sound truck exhorting the election of Joe Zilch to Congress. Or the ninny who toots his horn incessantly at the motorist in front of him who is stalled because of motor trouble or at the out-of-towner who doesn't know which way to turn to get to Independence Hall. Or the dimwit who drives down Seventeenth Street with his car radio blaring. Or the ambulance returning empty to Tuckertown with sirens blazing. Buildings must be built—expressways must be constructed."

But, as Dr. Robertson observes, a "quieter" city is one thing and a literally "quiet" one, another. The former is alive but pleasant; the latter is desolate.

Washington is certainly high on the list of the "quieter" cities, which is one more reason why it is a good place to live.

★

Selecting Tomorrow's Physicians

Medical schools everywhere strive for the best material possible from which to fashion good doctors. How best to go about obtaining it is a question for which no completely satisfactory answer has yet been found.

In the September, 1956, issue of *The Journal of Medical Education*, Sir Lionel Whitby, President of the First World Conference on Medical

Education, organized by the World Medical Association, reviews the proceedings of what he considers one of the most interesting sections of the Conference. This section concerned itself with the "requirements for entry into medical schools in different parts of the world, and also some of the methods used for the selection of students."

"One can learn much," Sir Lionel writes, "from other people's methods, whilst critical comments, which have an international spread, are an excellent corrective for national complacency."

In some European universities, for example, it is possible for anyone to study medicine who wishes to do so. The casualty rate under such a system is, of course, high. In the months following the opening of medical school, more and more find that they are not qualified, their previous learning and education not being sufficient for them to grasp the subjects offered. As a result, by the end of the first year, the survivors approximate the number the school can cope with successfully.

In India the usual age for entering medical school is 17 years, which, Sir Lionel observes, is far too young. Many medical educators agree that in most "well developed countries" the selection is limited because the number who wish to enter far exceeds those who can be accepted. In the United States it is reported some schools receive twenty times as many applications as there are vacancies. However, this, it is pointed out, is not a true picture because a large number apply to more than one school.

It is generally agreed, according to Sir Lionel, that "the basic purpose of selection is to choose, as far as possible, the kind of men and women who are most wanted in the medical profession, who have had an appropriate preliminary education, and who have the qualities of head and heart that go to make a good doctor." Two of the most widely used methods to ascertain whether candidates meet these requirements are (1) the preliminary selection, and (2) the interview.

Preliminary selection usually consists of a study of the applicant's academic record, and of statements and testimonials from people who know him. There is little difficulty in ascertaining the facts about the individual's scholastic attainments. Letters of recommendation are quite another matter, for it appears they seldom provide the information desired. Some medical schools have, therefore, resorted to questionnaires in which specific and pertinent questions are asked. This method, it seems, provides "standardized confidential personal assessment, instead of the usual diffuse confidential letter." Questions are designed to extract an estimate of the character and moral qualities, powers of leadership, independence and creative power, popularity, ability to speak and communicate ideas, capacity for inspiring confidence, and ability to coöperate.

The second method, the interview, is conducted by the dean or, more commonly, by an admissions committee. It is here, Sir Lionel states, that the proceedings of the Conference were most informative. Some of the shortcomings and virtues of this procedure when carried out by committees are described as follows:

> "It has to be admitted that interviews are incapable of standardization and control, and may clearly be vitiated by the prejudices of the interviewers. One man, for example, may not like red hair, or a prognathic jaw, but as yet there are no scientific ways of measuring personality; nor is there any method which, in the end, does not depend upon human judgment. Many other things, however, may emerge from an interview, such as the cultural background, which depends perhaps as much, if not more, on the family upbringing, as upon having been taught art, history and literature at school. The interview can reveal what is commonly called 'motivation,' an extremely important factor in determining success in a career. Why does the student wish to become a doctor? There is little doubt that, if he can honestly give the straight answer 'Because I have always wanted to be,' he is likely to make a good doctor, even though he may not be blessed with a full complement of erudite or other intellectual qualities."

One of the Conference participants, Dr. T. A. Devine, of the United Kingdom, offered this description of various types of candidates in speaking about motivation:

> "There was the student who took up medicine for humanitarian purposes; there were the 'Physician heal thyself' (often the would-be psychiatrist), and the 'Physician heal thy relatives' types; there were some who took up medicine because a mother, or other relatives, or they themselves had had an illness; there were those inspired by a motive which was not good, that of having power over others, and there were those who liked the social and economic status of a doctor."

Much depends upon the ability of the interviewers to judge the suitability of an applicant for a medical career although, as Sir Lionel says, "They are quite unable to state the mental process which is involved in such a judgment." Some, although expert in their particular fields, never become skillful in selecting student material. In these circumstances, it is suggested, although not explicitly stated, candidates of real capacity and the feel for medicine may be excluded. Interviewers, it is urged, should therefore be carefully chosen and given an opportunity to serve with others of proven ability before being entrusted with full responsibility for making selections.

Intelligence tests have sometimes been used in connection with the interviews, but the results with respect to subsequent performance of candidates have not been satisfactory.

As stated in the beginning, no system of screening candidates for medical training yet devised has been entirely satisfactory. However, if one is to judge by the finished product, the various methods adopted have, in recent years at least, been gratifyingly effective. At least that is the impression of those who have the opportunity of seeing and talking with recently licensed physicians.

Succeeding Boards of Censors, since the close of World War II, have interviewed several hundred applicants for membership in our Society. Your Observer is certain that a large majority of those who have served on the Board will agree that the impression made by the neophytes has been uniformly excellent. More important, information available would seem to substantiate the belief that their subsequent performance has, on the whole, been equally impressive, which, in the final analysis, is the real test.

No doubt, better methods of selection should and will be devised. In the meantime, the situation as it now exists would not seem to justify undue alarm.

★

". . . Some Bright Member . . ."

One of the most stimulating and entertaining columns in any medical journal is "In England Now — A Running Commentary by Peripatetic Correspondents," which appears in *The* (London) *Lancet*. Its informality, not too technical nature, and invariably good humor have undoubtedly contributed to *The Lancet's* reputation as being the medical publication most widely read by both physicians and their families.

In a recent issue a correspondent recalls "the good old days" before World War II when "parting with one's appendix was only slightly less pleasant than a luxury cruise and nearly as beneficial." Patients were given the "Dresden china" treatment for a substantial period of convalescence (usually two weeks) to "get one's strength up." However, "ever since some bright member of the medical profession discovered that fatal embolism was due to postoperative immobility hospitals have been amongst the strongest adherents of the 'Do It Yourself' craze."

There follows this description of what happens to today's patient immediately following an operation:

> " 'Well, you can begin to get up today,' the day-nurse greets you, less than 24 hours after your glorious, if unconscious, hour in the operating-theatre. 'You'll feel better then,' she adds, giving you a thank-heaven-that's-one-less-bedpan look.
>
> "Actually you are feeling reasonably comfortable where you are at the time, but you try to look as though

you have spent the night longing for her permission to get out of bed and ask politely the way to the bathroom (which is almost bound to be at the extreme end of the corridor). You lie and contemplate the journey for as long as you dare, thrusting courageously to the back of your mind an overwhelming desire to shout for a bedpan. It's an effort, but just because you happen to be a doctor's wife and an ex-nurse you can't expect preferential treatment. You struggle to a sitting position and eventually manage to swivel round until your legs are over the edge of the bed and you sit there recovering your breath.

"Slithering to the floor, you carefully straighten yourself as far as you can without snapping in two. Then having shuffled into your slippers and pulled your dressing-gown round your shoulders, you begin your perilous journey down the corridor, looking for all the world like the oldest inhabitant. You glare balefully through the door of the next room at the occupant who is enjoying her second week of idleness on the strength of nothing more serious than an ingrowing toenail, when you realize that your innards have come completely adrift and are going to part company with you at any moment. Frantically clutching your abdomen you stagger ahead to prevent the awful catastrophe happening in a public corridor.

"Having reached the bathroom, however, you find that your innards, and indeed all-that-in-them-is, are completely undislodgeable—a discovery which comes as a keen disappointment, for by this time you have made up your mind that life would be more pleasant without them.

"Back at last. How inviting that bed looks. It's a long way up, but never say die. Now that really *has* torn it. You've flopped back too suddenly on your pillows and bust all your inside sutures. Internal hemorrhage will surely ensue. You sink back exhausted, wondering weakly if anyone will notice you before you have bled to death.

" 'The pain,' you gasp feebly a little later when the doctor does his round. 'What's the matter?' he asks jovially. 'Wind? You want to move around you know. Why not try walking to the bathroom?' 'Wind?' asks Matron sympathetically. 'Wind,' nods Sister knowingly. 'Wind,' echo the nurses. 'You should get up and walk about a bit more.'

"Fortunately everything passes sooner or later, even wind, but the fact remains you are now an up-patient, and if by tomorrow you are not helping to make your own bed and those of your less ambulatory neighbors you can consider yourself a malingerer.

"Almost before you have time to write and tell your friends you have had an operation and to sit back and wait for the grapes to arrive, you find yourself back home, going about your daily round and common task secure in the knowledge (if it is any comfort to you) that if there is any clot around it won't be in your bloodstream."

T.W.

JOINT HOSPITAL STUDY ON DRUG REACTIONS

Prompt reporting of unusual or adverse reactions to drugs is the objective of a new joint study being carried on by 11 leading hospitals, according to a recent announcement by the Food and Drug Administration.

The pilot reporting system, sponsored by FDA, is being developed with the collaboration of the American Association of Medical Record Librarians, the American Society of Hospital Pharmacists, the American Medical Association, and the American Hospital Association.

Such a reporting system has been undertaken to obtain information regarding effects of drugs which may appear in some patients when they are administered to large numbers of people. This problem has been magnified by the increasing number of potent new drugs. Even the most extensive clinical studies cannot forecast all types of drug reactions which may develop throughout the population. Hospitals provide an ideal site for observing the effects of drugs and obtaining essential information which is not available from other sources.

This joint study is being undertaken in the interest of public health, better patient care, and the furtherance of the objectives of the Federal Food, Drug, and Cosmetic Act to insure the safe use of drugs. The 11 hospitals participating in the study are located in the East and Middle West, with 1 in the South, the Medical College of Virginia Hospital in Richmond. Participating hospitals in the Washington Metropolitan Area are George Washington University, Walter Reed Army, and U. S. Naval, Bethesda.

WASHINGTON'S CRIPPLED CHILDREN'S PROGRAM*

WILLIAM P. ARGY, M.D.

Medical Director, District of Columbia Society for Crippled Children, Inc.

Education during the past 100 years has been progressively influenced by Naturalism, Evolutional Naturalism, Individualism, Intellectualism, Socialism, and Nationalism. The tendency in the free world now is to revert to the older concepts of man as a person, belonging in society, recognizing the rights of society but standing above that society with rights of his own.

Such a concept demands the admission of at least 4 major factors in the personality, namely, physique, temperament, intellect, and character. In the ideal mature adult all of these factors are developed freely and equally. In the child they constitute perfectibles, and adequate education of the child necessitates the actualization of these perfectibles, developing him so that he can appreciate himself, and his position in the home, the community, the state, the nation, the world, and the universe, both in the natural and supernatural order.

This concept applies not only to the normal child but also to those children who have varying degrees of abnormality. One of these groups includes those who have motor handicaps due to brain damage or cerebral palsy.

It is significant that the development of the methodology of handling these children paralleled the evolution of the philosophic influence on education. Extending from the pre-Little era of custodial care, which was followed by corrective surgery for the few, then overdevelopment of normal functions with the sacrifice of abnormal functions and the improvement of abnormal functions, without sufficient attention being paid to the control of normal functions, the education of these children has now reached a stage where it adheres to the modern philosophical influence. There is, therefore, the organized team approach, drawing out each perfectible, the goal being maximum efficiency. Such a philosophical influence guides us in all of our activities.

The activities of the staff are clinical and educational. The staff consists of a Medical Director, 2 consultants in cerebral palsy, and a Scientific Council consisting of 32 members, each of whom is a recognized specialist in his particular field. Of equal importance is the resident staff. During the past year this staff consisted of a parent consultant, 2 psychologists, a coördinator and teacher, 3 additional teachers, 2 Speech, 1 Occupational and 2 Physical Therapists, and 3 medical secretaries. There was also an attendant and a cook, both of whom played an important part in the organization.

GENERAL STATISTICS

During the past year 560 children were under our care. Five hundred and eighty-one were seen the previous year. The average for the 5 previous years, however, was 463, the highest for any year being 581, the lowest 202.

The incidence of cerebral palsy patients per year for the Metropolitan Area according to the present estimation of the population should approximate 132. One of every 7, however, do not live, and the corrected incidence per year, therefore, should be 110. Nine per cent of these children need no treatment, and, therefore, there should be an incidence of about 100 children per year who require the services rendered by us.

During the past year there were 146 new patients. This compares favorably with an average of 147 new patients per year over a 5-year period, the highest being 218, the lowest 80. The 218 new patients were registered during the 1952–1953 period when we were building our organization, and this increase was, in all probability, due to the admission of a number of children to our facility to whom previously no such facilities were available. It is our opinion that, if the formula for the incidence is reasonably correct, we are no doubt absorbing all of the new patients each year.

These children usually require years of patient training. Therefore, children who were first introduced to us several years ago (table 1) are still under our observation.

---

* The Annual Report of the Medical Director of the District of Columbia Society for Crippled Children, Inc., for 1955–56, presented at its Annual Meeting, September 25, 1956, in the Society's Headquarters, 1767 Massachusetts Avenue, N.W., Washington 6, D. C.

TABLE 1

Patients Seen during 1955–1956 According to Year of Admission

Year	Number	Year	Number
1944	16	1951	33
1945	8	1952	52
1946	8	1953	63
1947	8	1954	71
1948	16	1955	115
1949	14	1956	146
1950	10		
TOTAL			560

The residence of the parents of these children seems to be evenly distributed throughout the entire Metropolitan Area (table 2).

TABLE 2

Residence of Parents

District of Columbia	266
Maryland	164
Virginia	130
TOTAL	560

Four hundred and fourteen, or 75 per cent, of these children were referred to us by physicians (table 3). The remainder were sent to us by clinics in various areas, particularly the District of Columbia, Virginia and Maryland.

TABLE 3

Source of Referral

Physicians	414
District clinics	74
Maryland clinics	9
Virginia clinics	7
Other states	6
Foreign countries	2
Armed Services	48
TOTAL	560

The District of Columbia Government facilities, the Kiwanis Clinic, Georgetown, Providence and Freedmen's Hospitals, Group Health Association, and the Mental Health Clinic were some of the District facilities which referred these cases.

Two hundred seventy-three children (table 4) were in the 3- to 7-year-old group.

TABLE 4

Age Incidence

Age:	Under 3	3–4	4–5	5–6	6–7	7–12	Over 12
Number:	47	53	64	79	77	171	69

This is 50 per cent of the children treated. Fifty-seven per cent of the children treated were under the age of 7. Those who were in the older age groups were principally children or adults who have been receiving services from us over a number of years.

Table 5 indicates that the children treated this year were predominantly white.

TABLE 5

Sex and Race

Sex	Race	
	White	Colored
Male	241	58
Female	221	40

The ratio is 4:1. Usually it is about 2:1. The discrepancy is purely coincidental. No child was refused services. The proportion of males to females in both racial incidences is according to expectation. It could be possible that the ratio of white to colored is changing.

In 413 instances (table 6) the income of the parents was determined.

TABLE 6

Income of Parents

Income	Number
Under $3,000	90
$3,000 to 5,000	183
$5,000 to 7,000	89
$7,000 to 10,000	47
Above $10,000	4
TOTAL	413

Sixty per cent of the parents received less than $5,000 per year. Eighty-seven per cent received less than $7,000. Twelve per cent received between $7,000 and $10,000, and only 1 per cent received more than $10,000. The expensive nature of the treatment would require an establishment of a non-profit organization such as ours for the treatment of most of the 87 per cent in the lower income groups. No organization could conduct a facility for the other 13 per cent without additional financial assistance.

The Program

The program can be divided into clinical and rehabilitative.

THE CLINICAL PROGRAM

The clinical program provides means for the diagnosis and recommendations for treatment. Rational treatment depends upon adequate diagnosis. Therefore, the activities of the members of the Scientific Council and the consultants in cerebral palsy are of tremendous importance.

The medical secretaries play a very important part on this team. Being the first contact for the patients, they obtain the medical information from the source of referral. In many instances the patients have been to other clinics. The secretaries obtain the results of those studies, incorporating them in the records. They schedule the clinics, make appointments for, and assist at those clinics, obtaining new information for the files. With the completion of the studies, accurate recordings are sent to the referring physicians or clinics. Permission being granted by the referring source, assignments are made to our facility, or, if it is available, to another facility for the recommended treatment. The secretaries have charge of the files, the compilation of statistics, the transmission of correspondence, and the arrangements for transfer of a child to an institution. A word of encouragement to a parent and obtaining a suitable residence or even a place of employment are part of their daily routine. Patience, benignity, kindness, loyalty and devotion to duty are necessary virtues, as well as a general secretarial and medical knowledge. Their work is too involved for statistical analysis, but it is enormous.

The Clinics. There were 403 children seen in the Cerebral Palsy Clinic. This is an increase over any previous year, and there was also a marked increase in the number of clinic visits (table 7). The increase is manifested mainly in the visits to the Cerebral Palsy Clinics, since there was a decrease in the number of visits to the other clinics, with the exception of the Anti-convulsive Clinic. This does not mean, however, that these clinics did not provide adequate services, because every child received these services from us when necessary, and they did not seem to be required when reports of competent examinations were received from other facilities.

TABLE 7

Cerebral Palsy Clinic

	5-Year Average	High	Low	1954–1955	1955–1956
New cases	128	176	80	176	138
Repeat cases	534	710	259	671	831
Total visits	662	852	344	847	969
Braces received	75	110	30	110	131

The number of new patients seen in the Cerebral Palsy Clinic this year compares favorably with the 5-year average. The number of braces received has reached a new peak. A composite statistical analysis of the entire clinical program is represented in table 8. It can be observed from this table that the total number of clinic visits this year equals the total of the highest number of visits to each clinic during any of the previous 5 years.

TABLE 8

Complete Clinical Analysis

	Average for Previous Years	High	Low	1954–1955	1955–1956
Cerebral Palsy	662	852	344	847	969
Ophthalmology	117	157	66	141	118
Otolaryngology	127	165	78	165	119
Pediatric	117	142	76	142	130
Dental	116	142	80	142	121
Anti-convulsive	188	201	167	198	198
Psychiatric	7	14	4	14	18
Total	1,334	1,673	815	1,649	1,673

The diagnosis indicates that 87 per cent of these children suffer from handicaps which are classified as cerebral palsy or which could require the same type of treatment (table 9).

Some of the children whose classification was mental retardation or epilepsy had other manifestations of brain damage, and the diagnosis of the predominant symptoms were used in order to stress the principal method of attack. The miscellaneous group consisted of deafness, blindness, and club foot. Nine cases were undiagnosed because of insufficient information or because the symptoms were too obscure at the time of the examination. A case of hemivertebra was placed in the class of spina bifida. In instances in which the diagnosis indicated that the child could receive more adequate treatment at another facility, mental retardation, muscular dystrophy, schizophrenia, etc., the children were referred to that particular clinic.

TABLE 9

Diagnosis

Spastic	201
Athetoid	119
Rigidity	63
Ataxia	34
Mental retardation	33
Mixed dominant	23
Mongoloid	18
Spina bifida	10
Speech problem	10
Undiagnosed	9
Epilepsy	7
Miscellaneous	7
Tremor	6
Peripheral nerve damage	6
Schizophrenia	3
Normal child	3
Muscular dystrophy	2
Physical retardation	2
Endocrine	2
Neurofibromatosis	1
Xanthomatosis	1
TOTAL	560

REHABILITATION PROGRAM

For descriptive purposes this might be divided into educational, parent-counseling and professional and public instruction. These separations, however, are arbitrary and are not practically divisible.

Educational Program. We use this term to include the activities involved in developing these children. As stated above, the child's perfectibles include physique, temperament, intellect and character. They are not as easily separated, and this division is only of value for analytical purposes. The teachers' dominant objectives are the control of the emotions, socialization, and the institution of ideas in the child in order that with proper motivation they will be transferred into concrete acts. This cannot be realized without sufficient development of voluntary motor control. The development of the latter is the function of the physical, occupational and speech therapists. They in turn are dependent upon the teacher for socialization and emotional control in the child, without which motor development will be delayed. Furthermore, it is impossible for the therapists to act without developing the emotional, intellectual and social aspects, each one, however, emphasizing the approach in his particular field, all of them acting as an integrated and coördinated whole.

The School. As in former years there were winter and summer sessions. There were 108 children enrolled (table 10).

TABLE 10

School Statistics

	1954–1955	1955–1956
Number of children	108	108
Number of sessions	8,910	8,401
Percentage attendance	74	83

The average daily attendance was better this year in spite of an epidemic of measles. There were 2 groups who attended both daily sessions and 4 groups who attended single sessions each day. Two of these single session groups consisted of children who have severe mental and physical handicaps, and the results obtained with this group will be mentioned below.

Therapy Sessions. No attempt will be made to compare the statistics of this year with any year except the last because that was the one which presented the highest volume of work of all years (table 11). There is a definite increase over that peak this year.

TABLE 11

The Therapies

	Physical		Occupational		Speech	
	1955	1956	1955	1956	1955	1956
Number of children	104	147	85	127	110	101
Number of sessions	4,524	6,087	2,411	4,370	3,264	5,180

This analysis shows that there was a total of 15,637 sessions this year, compared with 10,199 sessions last year.

Volunteer Services. This is the first year that we have had any organized effort to assist us by volunteer workers (table 12). They were extremely faithful in their attendance, and the quality of their work was exceptional.

TABLE 12
Volunteer Hours

Red Cross	1,420
Junior League	507
Miscellaneous	757
TOTAL	2,684

Lectures were conducted for them by members of our staff in September. Without volunteer workers we would have been unable to have accomplished this increased volume of work.

Psychologic and Psychiatric Services—Staff Meetings and Parent Counseling. It would be difficult to discuss these services separately. The education of the child is primarily the duty of the parents. The educators collaborate. The psychologist in her examination obtains information which is invaluable. The psychiatrist helps when the problem becomes involved. All of these factors which have been obtained, together with the facts gained by daily observation, are used in the final evaluation at the frequent meetings of the staff. The conclusions form the basis for the parent counseling.

The technic at first is directive, instructing the parent. Later it becomes nondirective, leading the parents to their own solution of the problem. At times it may be more or less indirect nondirective, when the parents have an opportunity to observe the progress of their child in comparison with the progress of his classmates.

This program involved a complete battery of 151 psychometric examinations. There were also 18 psychiatric clinics, numerous staff conferences, and at least 200 formal parent conferences, not to mention innumerable informal discussions.

The work with these children is trying. At times it is marked with frustration. The personality of the educator is important. We again use that term because we believe that the therapists also belong in that category. They must be well trained in their particular field. They need all the virtues plus a flexibility of personality to the extent that they can descend to the emotional level of the child and in turn ascend and discuss intelligently the results of their observations.

Results. We believe that this unified approach produces the maximum results. At least this was proven in the instances of the 2 most retarded groups, the majority showing improvement in excess of their chronologic expectations. The manuscript of an article written by one of the members of our staff is now in the hands of the printer and will be published in the next issue of the bulletin of a local university.

Public Instruction. The public must become aware of our problem together with the means at hand for its solution. Lectures have been given to various civic and professional organizations. In the spring a course of lectures was given for professional groups who were interested in this particular field. A workshop was conducted by our staff at a local university. Excellent relationships exist between our group and other groups in this area, and there is a constant exchange of ideas.

Our program accentuates unity. The entire personality is a unified structure. The healthy personality is our objective. Because of the physical handicap, in many instances the ideal goal is impossible. We should try to produce in these children a feeling of belonging and security and in the majority a desire to work. We can at least develop them to a point where they can understand their place in society, and in spite of their handicap be content.

CONCLUSION

We believe that we have had an excellent year. We also know that all of our efforts would have been to no avail without coöperation.

The Administrative Staff, the volunteers, the members of various civic and professional organizations, those who quietly and unobtrusively gave their time to transport the children to and from the school, the Scientific Council, the Ladies Auxiliary, the President, and all of the members of the Board of Directors—to each and every one of them, the members of the Professional Staff want to express their sincere gratitude. Without their understanding, kindness, help and coöperation this work would not have been possible.

On the Lighter Side

November is here, and in a very few short weeks 1956 will have come and gone. However, we do have December ahead of us when we will be struggling harder than ever trying to decide what in the world to get dear Aunt Susie and crabby old Uncle Henry for Christmas. Or—what would appeal to the patrician tastes of a female relative who has allowed too many summers to get by without a permanent male attachment. And how to put the happy sparkle in the eyes of the very young who look forward to Christmas with such eager anticipation. Friends, these trying times when men's minds are befuddled and their feet weary will come upon us in a very few short weeks, therefore this warning one month in advance!

Now, however, we have another holiday on hand that arrives appropriately one month before Christmas—give or take a few days—a holiday that goes back to the Pilgrim Fathers so many years ago that many of us have forgotten the year. We have not forgotten its purpose, however, and that is the important thing, because Thanksgiving means exactly that—giving thanks!

Physicians have so many, many things for which to be thankful. First of all, we are thankful for the modicum of good health that we enjoy. Sure, the newspapers are using much smaller type these days, and our arms are not quite long enough for reading purposes. And that same old flight of stairs that we used to take in stride has gotten much higher and harder to climb. We can go 18 holes of golf on our day off, but we do not feel like taking the wife out to dance in the evening of the same day. We can work hard in the operating room and in the office all day, but that old comfortable chair looks mighty good after dinner. So we have slowed up a bit—but we can still enjoy the simple pleasures, and for that we should be thankful!

Secondly, we have a medical practice to enjoy; and we should be thankful that we are allowed the privilege of freedom of practice without the yoke of regimentation and socialization to stifle our initiative or to curb our interest.

Thirdly, we have those who love us and believe in us and who have dedicated their lives to walk down the long road of life hand in hand with us. For these our loved ones we should be thankful.

Fourthly, we should be thankful that we are living in America, the land of the free. So many of us who have been born here and who have lived and been educated in this great country of ours take this blessing for granted. We forget that this too is a blessing for which to be thankful and for which to give thanks.

Lastly, but certainly not the least, there is our God-given right to worship the Giver in the manner to which we have been raised. Even those who do not believe in a Supreme Being have the freedom of choice to do so, and they should be thankful.

Thanksgiving, therefore, is the season of the year when we should take inventory of all that we have and give thanks for it.

BOWLING NOTE: The D. C. Medical Bowling League has been improved by the welcome addition of two new teams made up exclusively of dentists. This has given the League 15 teams of competitive bowlers and will add immeasurably to the fun of bowling. Dr. Frank Bacon, President of the League, stated that any one doctor or dentist who would like to join up, please phone him for team assignment.

CHUCKLE NOTE: A Chicago matron was seated next to a famous Boston lady at a Boston Society shindig. During a crisp exchange of conversation, Mrs. Boston advanced the information that "in Boston, we place *all* our emphasis on breeding." Thereupon the Chicago matron responded, "Oh, in Chicago we think it's a lot of fun, but we do manage to have a great many outside interests."

* * * * *

Noah Webster was caught one day by his wife as he was embracing the chambermaid. "Mr. Webster," cried his wife, "I am surprised!" The great lexicographer gazed upon his wife in mild reproof, and sadly shaking his head said, "No, no, my dear, you are amazed. It is we who are surprised."

POETRY NOTE: Women's faults are many, Men have only two: Everything they say, Everything they do . . . . A change of lipstick now and then is relished by the best of men . . . . Into the coop the rooster rolls an ostrich egg, the hen he faces, not to chide or deride, but to show what's being done in other places.

J. Earl Kadan, M.D.

MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, September 24, 1956, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Paul C. Adkins, 901 23rd Street, N. W.
Theodore C. Alford, 2300 K Street, N. W.
Edgar N. Brawner, Jr., 7805 Radnor Road, Bethesda, Md.
Robert J. Brennan, 1746 K Street, N. W.
George C. Buchanan, 1834 Eye Street, N. W.
Wilfred R. Ehrmantraut, 8510 Tahona Drive, Silver Spring, Md.
Stanley H. Eldred, 927 18th Street, N. W.
Victor H. Esch, 3409 Wisconsin Avenue, N. W.
Leon Ferber, 2025 Eye Street, N. W.
John F. Gillespie, 1902 37th Street, N. W.
Frances D. Hanusik, 306 Kennebec Street, S. E.
Charles E. Higbee, 10803 Montrose Avenue, Garrett Park, Md.
Peter I. Kenmore, 1918 K Street, N. W.
Wendell M. Lucas, Freedmen's Hospital
Douglas B. Price, 5437 Connecticut Avenue, N. W.
Dorothy A. Starr, 2301 Cathedral Avenue, N. W.
Howard P. Treichler, 1746 K Street, N. W.

Associate Members

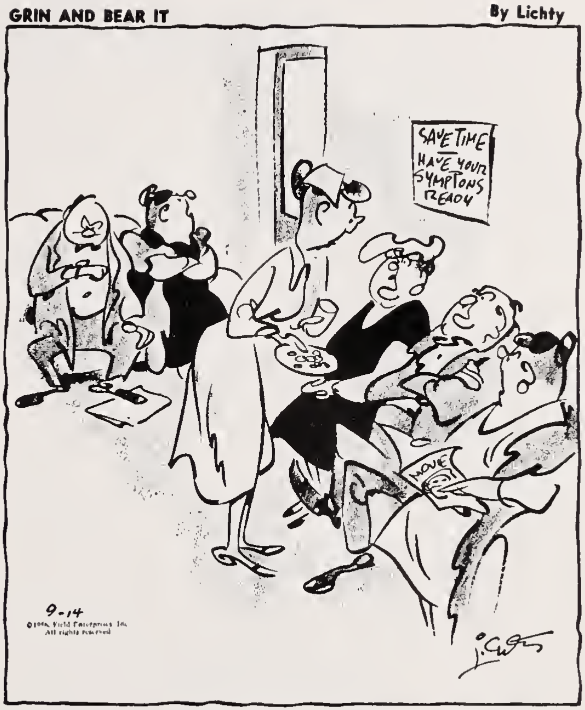
Crawford S. Brown, 8218 Wisconsin Avenue, Bethesda, Md.
Harry E. Ferris, D.D.S., M.Sc., 4415 Queensbury Road, Riverdale, Md.
Louis E. Fettig, 5246 Jackson Street, Philadelphia, Pa.
Dean H. Martin, 2333 Huidekoper Place, N. W.
James R. McClelland, 1305 N. Ode Street, Arlington, Va.
Gordon M. Meade, 1427 Eye Street, N. W.
Richard C. Myers, 8512 Old Georgetown Road, Bethesda, Md.

Affiliate Member

Jean H. Pearson, 2025 Eye Street, N. W.

Resident-Intern Members

Victor L. Assevero, 5005 Illinois Avenue, N. W.
Robert F. Dyer, Jr., 3813 Garrison Street, N. W.
Ruth E. K. Jakoby, 2141 Eye Street, N. W.
Ruth L. Kirchstein, 4926 Battery Lane, Bethesda, Md.


GRIN AND BEAR IT
By Lichty
SAVE TIME HAVE YOUR SYMPTOMS READY
MOVIE
9-14
©1956, Field Enterprises, Inc. All rights reserved

"Compliments of Doctor Truffle, folks!... Tranquilizer pills to soothe you while you're waiting!..."

(Published through the courtesy of the Chicago Sun-Times Syndicate and the *Washington Post and Times-Herald.*)

The following applicants for membership will be voted on at the meeting of the Executive Board, December 4, 1956.

For Active Membership

J. Robert Andrews, Western Reserve University—1932
William E. Beaven, Johns Hopkins University—1948
Philip Bloemsma, University of Amsterdam, The Netherlands—1926
John A. Bowler, Jr., George Washington University—1951
Donald L. Carlon, State University of New York—1952
Harry N. Carlton, George Washington University—1954
C. Barrie Cook, George Washington University—1948
Norman W. Harris, Jr., Howard University—1947
Catharine G. Knop, Hamburg University of Medicine, Germany—1937
Edward I. Kushner, New York Medical College—1949
Robert D. Lincoln, Tufts College Medical School—1949
Eleanor L. Long, University of Tennessee—1949
Jane B. McKewen, Johns Hopkins University—1951
Robert H. Parrott, Georgetown University—1949
Abraham Ruchwarger, Royal University of Milan, Italy—1932
Irwin Siegel, Western Reserve University—1947
Richard A. Steinbach, Medical College of Georgia—1947

For Associate Membership

Ida Djung, Women's Christian Medical College, Shanghai, China—1939
Ai Ding Fang, Women's Christian Medical College, Shanghai, China—1935
Timothy L. Kelly, Jr., Tufts College Medical School—1949
Murray Paul, Howard University—1953
Bennett A. Robin, Howard University—1955
Theodore A. Thorson, University of Washington—1950

For Resident-Intern Membership

Robert J. McAllister, Georgetown University—1956
John C. Rhoads, George Washington University—1956

Recent changes in membership status:

Active to Associate

Georges F. McCormick
Roland W. Penick
Armando M. Sison

Active to Resident-Intern

Francis D. Fowler

Associate to Resident-Intern

Abraham I. Gimble

Resident-Intern to Associate

Edward S. Witowski, Jr.

Resigned

Active

Thomas F. Cleary
Samuel S. Morrison
Harvey N. Shapiro
Muriel S. Sowers

Associate

James L. Kelley, Jr.
Seward E. Miller
Thomas W. Stewart

Resident-Intern

James K. Gordon

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
August 14	Dr. George Maksim	Teen-age Health Problems	Civitan Club
September 7	Dr. Ralph M. Caulk	Activities of the D. C. Medical Society	Reciprocity Club
September 22	Dr. Julius Schreiber	The Psychodynamics of Inter-group Tension	Alpha Omega Fraternity
October 10	Dr. W. Ross Morris	Malignancies of the Female Reproductive Organs	Ki-Wives
	Dr. S. Hazen Shea	The Menopause	
	Dr. Herman S. Hoffman	Diet	
October 16	Dr. Julius Schreiber	Emotional Needs of Children	Meridian Hill Parent-Teachers Association
October 17	Dr. Caroline Jackson	Aspects of Hysterectomy (Series on Women's Diseases)	WTOP-TV, Donna Douglas Program
October 17	Dr. Maxwell Boverman	Problems of the Years of Maturity	South Arundel Club, Galesville, Md.

News and Personals

MEETINGS—Past and Future

The 10th Clinical Session of the American Medical Association will convene in Seattle, Washington, November 27–30, with an anticipated attendance of some 2,500 physicians. Scientific meetings will be held in the Civic Auditorium, where the scientific and technical exhibits will also be displayed. Headquarters for the House of Delegates and meetings of the Board of Trustees, councils and reference committees will be the Olympic Hotel. Planning to attend the sessions of the House of Delegates from the District of Columbia are Drs. Raymond T. Holden and Victor R. Alfaro, delegates, and Theodore Wiprud, Secretary of the Society.

The Surgeon General's Monthly Medical Meeting will be held, December 20, at 8 p.m., in the Sternberg Auditorium of Walter Reed Army Medical Center. The program will be devoted to Recent Army Medical Service Advances. Colonel R. L. Hullinghorst, MC, USA, will be moderator. Members of the District Medical Society are invited to hear the following papers:

"Diagnostic Supervoltage Roentgenography," Lt. Colonel Gerald M. McDonnel, MC, USA.

"Relationship between Emotional Stress and Pituitary-Adrenocortical," John W. Mason, M.D.

"Studies on Q Fever in Man," Colonel W. D. Tigertt, MC, USA.

The Women's Medical Society of the District of Columbia extends a cordial invitation to physicians, especially to those who treat older patients, to attend a Panel Discussion on Geriatrics and Common Sense, which will be held in the Medical Society's auditorium, December 4, beginning at 8 p.m.

Dr. Joseph W. Still, Assistant Professor of Physiology, George Washington University School of Medicine, will present the physiological aspects of aging; Dr. Edward J. Stieglitz, specialist in geriatrics, the medical aspects; and Dr. Joy Elmer Morgan, Editor of *Senior Citizen*, the sociological aspects. A discussion period will follow these talks.

The Southern Psychiatric Association met at the Mayflower Hotel in Washington, September 30, October 1 and 2. Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, was Chairman of the Committee on Arrangements and Entertainment. Dr. Wallace M. Yater, Chairman of the Executive Board of the District Medical Society, welcomed members and guests on behalf of the Society at the opening session, October 1. At the same session, Dr. Dexter M. Bullard, President of the Southern Psychiatric Association, addressed the members briefly.

Among those who presented papers during the meeting was Dr. Preston A. McLendon, Professor of Pediatrics, George Washington University, who spoke on the subject, "The Children's Doctor and Delinquency." Discussants of scientific papers included Drs. Overholser, George N. Raines, and John D. Schultz.

Washington members of SPA are Drs. Daniel Blain, Leon Ferber (both members of the Medical Society of D. C.), Benedict Nagler, and Robert J. Wetmore. Drs. Overholser and Raines are honorary members. The roster of SPA includes 2 Associate members of the District Medical Society who reside in Maryland. They are Dr. Bullard and Dr. Henry P. Laughlin.

The James C. Kimbrough Urological Seminar was held at the Walter Reed Army Medical Center, September 19–21. This postgraduate refresher course in urology, which has been held annually since 1953, was named in honor of the late Colonel James C. Kimbrough. The papers are presented primarily for urologists in the Armed Forces, but invitations are also issued to Reserve officers, National Guard, and civilian urologists.

Three members of the Medical Society were Seminar lecturers this year. They were: Dr. William P. Herbst, Professor of Clinical Urology; Dr. Lloyd G. Lewis, Professor of Urology; and Dr. Othmar C. Solnitsky, Professor and Director of the Department of Anatomy, all of Georgetown University School of Medicine. Dr. Herbst gave an address on "Clinical Application of Metabolic, Biological and Physiological Mechanisms Related to Inflammation, Shock and General Resistance." Dr. Lewis spoke on "Open Surgical Management of the Prostate," and Dr. Solnitsky presented two papers, "Embryology of the Genitourinary Tract" and "The Anatomy of the Genitourinary Tract."

The Jacobi Society of Washington held its first dinner meeting, October 15, at the Willard Hotel. The guest speaker, Bill Sprague, NBC radio and television commentator, discussed "The Current Political Scene."

The Fairfax County Medical Society elected new officers at its meeting, September 11. They are:

Dr. Thomas Haggerty, *President-elect*; Dr. Thomas E. O'Brien, *Vice President*; Dr. Frances Ayres, *Secretary;* and Dr. Thomas W. Tusing, *Treasurer*.

Dr. Gerard Inguagiato, of Falls Church and Arlington, took office as President of the Society. Dr. William L. Harris, the retiring President, will serve as a member of the Executive Committee.

Dr. Inguagiato appointed Dr. Andrew Tessitore as Chairman of the Diabetes Detection Drive for Fairfax County.

GENERAL NEWS

The Executive Board of the Medical Society of the District of Columbia met in regular session, September 24. Present members of the Obstetrical Board were reappointed for a 3-year period. They are: Dr. C. K. Fraser, Chairman; Dr. J. Bay Jacobs, Secretary; and Drs. Raymond T. Holden, Andrew A. Marchetti, Ella Oppenheimer, and John L. Parks; also Dr. Alvin F. Robinson, representing the Medico-Chirurgical Society of the District of Columbia, and Dr. Coleridge Gill, representing Howard University School of Medicine.

Upon the recommendation of the Committee on Public Information, the Board voted to contribute $100 in support of the Washington Science Fair and to lend active support to this project through the Washington Academy of Sciences.

It was reported to the Board that Dr. James G. Sites had been appointed to the Committee on Regulations for Placement of Children in Family Homes. The Board approved the appointment.

The Secretary reported that he had accepted an invitation to serve as a member of the Conference on Hospital-Physician Relationships and Prepayment Principles as They Affect the Quality of Medical Care. This is a group which is being organized under the auspices of the School of Public Health and Administrative Medicine at Columbia University.

The District of Columbia Society of Internal Medicine was founded following a meeting of the Section on Internal Medicine and Allied Subspecialties of the Medical Society of the District of Columbia, September 18, 1956. This Society, which hopes to affiliate soon with the national organization, the American Society of Internal Medicine, has as its primary objective the economic and professional welfare of internists and the preservation of the practice of internal medicine. Internists are seeking recognition by Blue Shield and insurance companies as specialists.

The meeting, which was attended by 103 internists, heard Dr. Henry D. Ecker, pro tem chairman, recount the experiences of the California Society of Internal Medicine in its 10-year quest to place the internist in his rightful professional and economic position with respect to prepaid voluntary health insurance plans. Dr. Ecker also described the circumstances surrounding the recent emergence of the American Society of Internal Medicine at the time and place of the 1956 Annual Session of the American College of Physicians in Los Angeles. One of the District of Columbia's prominent internists, Dr. Wallace M. Yater, helped draw up the by-laws for this national society.

Officers of the Section on Internal Medicine and Allied Subspecialties are acting as the pro tem officers of the District of Columbia Society of Internal Medicine, and include Drs. Ecker, Benjamin Manchester, William K. Billingsley, Robert R. Montgomery, Clayton B. Ethridge, and Stuart O. Foster.

All qualified internists are strongly urged to join this Society for the protection of their economic future.

The Washington Heart Association is again making available grants-in-aid to nonprofit institutions in direct support of a particular investigator, for a specific program of research under his direction. In support of research in the cardiovascular or basic sciences related to it, these grants are awarded in amounts up to $5,000 per annum for a period of 1 year. Re-application will be considered for the following year. Applications received by May 1, 1957 are granted for the fiscal year beginning July 1 following.

Applications for summer fellowships must be received by May 15, 1957. These fellowships consist of stipends of $200 a month for 3 months to students of local colleges interested in gaining experience in research in sciences basic to medicine, with assignments under a competent sponsor. The grant will be paid monthly for any 3 of the following summer months as approved by the sponsor.

Information and application forms for grants or fellowships may be secured from the Executive Director, Washington Heart Association, Inc. 1154 19th Street, N. W., Washington 6, D. C.

George Washington University School of Medicine held its **133rd Opening Assembly** on September 17 at the Medical School. Dr. Walter A. Bloedorn, Dean of the School of Medicine, welcomed the new and returning students and introduced a number of distinguished guests who were present for the occasion. The latter included the speaker, Supreme Court Justice Felix Frankfurter; District Commissioner Robert F. McLaughlin; Dr. Leonard Carmichael, Secretary of the Smithsonian Institution; representatives of the Army, Navy, Air Force, and Veterans Administration; and members of the University's Board of Trustees.

President of the University, Dr. Cloyd H. Marvin, addressed the students briefly. Justice Frankfurter had chosen for his subject, "Medicine and Law: Parts of a Whole." A considerable portion of his address concerned the influence which 4 doctors had had upon his own life. These doctors were William Beaumont, Isaac Ray, Major General William C. Gorgas, and Bailey Kelly Ashford. All of these doctors had attained prominence not because of where they practiced but because they developed their faculties of scientific observation. He inferred that both professions, medicine and law, are apt to pursue their callings too narrowly and too exclusively, allowing the profession to imprison the individual.

Following the Assembly, Dean Bloedorn was host to members of the faculty and guests at a luncheon at the Mayflower Hotel. At the luncheon Dr. Bloedorn displayed the check which Mr. Robert V. Fleming, Chairman of the Board of Trustees, had received earlier in the day from the Ford Foundation in the amount of $500,000.

The Medical School enrollment this year is 372, of which 103 are freshmen.

In a news release, September 6, the **Ford Foundation** stated that grants totaling $21,750,000 were being distributed to 44 privately supported medical schools now in operation in the United States. The three medical schools in the District of Columbia, Georgetown, George Washington, and Howard University, benefited in the amount of $500,000 each.

This money is part of the $90 million which the Foundation appropriated last December to aid the instructional programs of the private medical schools.

The grants are to be held by the recipient institutions as invested endowment for at least 10 years. During this time the income from the endowment may be expended for instructional purposes. Excluded from purposes of the grants are construction and research needs. After a 10-year period the medical schools will be free to use the principal sum as well as endowment income.

During special ceremonies, October 1, the **Armed Forces Medical Library** was officially turned over to the Public Health Service, Department of Health, Education and Welfare, by Dr. E. H. Cushing, Deputy Assistant Secretary of Health and Medical Affairs, Department of Defense, and was accepted by Dr. Leroy E. Burney, Surgeon General of the Public Health Service. Dr. L. T. Coggeshall, Special Assistant for Health and Medical Affairs, spoke on behalf of the Department of Health, Education, and Welfare.

Colonel Frank B. Rogers, Director of the Armed Forces Medical Library, will continue as Director of the new National Library of Medicine.

Among the distinguished guests present at the ceremonies was Dr. Worth B. Daniels, Professor of Medicine at Georgetown University School of Medicine.

Group Health Association plans to open a new branch medical center in the Silver Spring Medical Building at Georgia Avenue and Plyers Mill Road. The unit will be known as the Silver Spring-Wheaton Branch of GHA.

At a membership meeting of the Association, September 25, service award pins were presented to employees who had served for 15 or more years. Physicians honored were Dr. Henry H. Lichtenberg, Medical Director, and Drs. Charles Albright, Robert D. Ralph, and Arthur B. Rosenbaum. Physicians honored for 10 to 15 years' service were Drs. Isadore M. Alpher, Ruth B. Benedict, Natalie Deyrup, Arnold H. Gould, Irving Schulan, and Harold Stevens.

The Board of Directors of **Doctors Hospital** has plans under way for construction of a $700,000 addition to the Hospital.

The new work will change the present T-shaped building to a modified H-shaped structure and will bring the entire height of the building to 11 stories. Space will be provided for one new operating room, an additional recovery room in the obstetrical section, and a new laboratory. There will also be space for 75 more beds and expanded facilities to house the resident staff.

Georgetown University has been allotted $75,000 by PHS in matching funds in order to build an animal research facility for its Medical School. When the building and renovation program is completed, at an estimated cost of $150,000, the Medical School will qualify for allocations of dogs from the District Pound for use in medical research.

Cornerstone-laying ceremonies for a million-dollar addition to **Arlington Hospital** were held, October 12. Mr. John Anderson, Hospital Administrator, said construction of the three-story addition is well advanced and the building is expected to be ready by January.

The new wing will provide 70 new beds, giving the Hospital a 260-bed capacity. It will include a new X-ray department, added emergency room facilities, and a new boiler plant and laundry.

The American Cancer Society awarded a research grant of $37,450 to the George Washington University Cancer Clinic on September 1. The research will be conducted under the direction of **Dr. Louis K. Alpert** of the Clinic.

A new health organization in Washington is the **Washington, D. C. Chapter of the National Cystic Fibrosis Research Foundation.** The Chapter is made up mostly of parents of children suffering from cystic fibrosis and celiac disease, since the two diseases are often confused because of the similarity of symptoms. Other interested persons are also invited to join the Chapter.

The organization is devoted to raising funds for research and distributing information to the public regarding these diseases. Interested physicians are welcome at the monthly meetings of the group, which are held on the second Sunday of the month, at 2:30 p.m., in the Washington Post Building. Recent speakers at their programs have included Dr. Robert H. Parrott, Physician-in-chief of Children's Hospital, and Dr. James P. Mann. Dr. Arthur I. Sims, pediatrician in Arlington County, will address the December 9 meeting of the Chapter on "The Avoidance of Psychological Crippling in the Chronically Ill Child."

Dr. Parrott, Dr. Sims, and Dr. Lewis E. Gibson, of the National Institutes of Health, are serving on the Medical Advisory Board.

The Greater Washington Area Chapter of the National Nephrosis Foundation, Inc. was organized early in the year, with offices at 1126 Dupont Circle Building. The first fall meeting of the Chapter was held at Children's Hospital, September 26. Future meetings are scheduled for the last Wednesday evening of each month at Children's. Physicians who are interested in the work of the Foundation are cordially invited to attend.

The Chapter hopes to establish fellowships at

Georgetown and George Washington Universities to promote further research in the field of nephrosis.

A medical board to serve with the group was recently appointed. Members are Drs. George E. Schreiner, James H. Baxter, Allan B. Coleman, Preston A. McLendon, Laurence H. Kyle, John A. Washington, and Fernando R. Leyva.

Mr. John H. Mullendore has succeeded **Dr. Warwick T. Brown** as **Administrator of Emergency Hospital.** Dr. Brown will be Administrator for the new Washington Hospital Center, which is under construction. He will continue at Emergency Hospital as a consultant.

Mr. Mullendore has been associated with Emergency Hospital for the past 19 years. For the first 5 years he was auditor, then financial assistant administrator until the present appointment.

Because of the critical shortage of interns, Emergency Hospital has replaced doctors on the ambulances with first-aid experts. This plan went into effect July 1.

Dr. John D. Porterfield has been named **Assistant to the Surgeon General of the Public Health Service.** As such, he will have Service-wide responsibility for planning and developing new programs, for providing a continuous appraisal and evaluation of existing activities, and for advising on proper balance among the various programs of the Service. He will give particular attention to the fields of chronic diseases and aging, in which a variety of programs is developing. He assumed his new duties on October 16.

Dr. Porterfield received his medical degree from Rush Medical College of the University of Chicago and his Master's degree in Public Health from the Johns Hopkins University School of Hygiene and Public Health. He was commissioned in the Regular Corps of the Public Health Service in June, 1939.

Frank Carey, science reporter for Associated Press, **and Nate Haseltine**, science writer for *The Washington Post and Times-Herald*, received the annual Howard W. Blakeslee Awards for outstanding reporting in the field of heart disease at the annual dinner of the American Heart Association in Cincinnati, October 28. Both Mr. Carey and Mr. Haseltine are well known to Washington physicians for their coverage of medical news in the Washington Metropolitan Area over many years. Mr. Carey was cited for his year-round news coverage of developments in cardiovascular research, treatment and prevention, and Mr. Haseltine, for a series of articles on heart disease in children. They were included among six winners representing newspapers, national magazines, radio and television. Each award carries an honorarium of $500.

In addition, a special Blakeslee Award was made to Dr. Paul D. White, consultant in cardiology to President Eisenhower, for "creating better understanding of heart disease."

Dr. Thomas M. Rivers, of New York City, formerly Vice President of the Rockefeller Institute for Medical Research, has succeeded Dr. Hart E. Van Riper as Medical Director of the **National Foundation for Infantile Paralysis.** Dr. Rivers is a graduate of Johns Hopkins University School of Medicine. He joined the national staff of the Foundation a year ago as assistant to Mr. Basil O'Connor, President of the Foundation.

Dr. Rivers is the author of "Viral and Rickettsial Infections of Man." He is the discoverer of *Bacillus parainfluenza* and virus III infection in rabbits.

PERSONALS

Dr. Charles D. Shields has been appointed **Associate Dean of Georgetown University School of Medicine**, effective October 1. He has been Professor and Chairman of the Department of Physical Medicine and Rehabilitation at the School since 1954, which post he will retain in addition to the deanship.

Dr. Shields is a 1934 graduate in medicine of Georgetown. He received the degree of Master of Public Health from Harvard in 1937.

During World War II, he served in the North African theater and in Italy, where he was Chief of Hospitals and Medical Care Section of the Allied Control Commission. He was later named Chief Public Health Officer for Bavaria.

Dr. Shields left the Army in 1946 to serve as

Commissioner of Health in Buffalo, N. Y., returning to the military service in 1947. He served at Walter Reed and Brooke Army Hospitals, and at the Medical Field Service School, Fort Sam Houston, before he was assigned to the Professional Division of the Office of the Surgeon General of the Army, where he held the rank of Colonel.

Dr. Shields is a new appointee to the Veterans Administration Special Medical Advisory Group. This group meets quarterly to advise the Administrator of Veterans Affairs and the Chief Medical Director on the VA medical program. Dr. Shields replaces Dr. Donald A. Covalt, of the Bellevue Medical Center, whose term had expired.

Dr. Oscar B. Hunter, Jr. was elected **President-elect of the American Association of Blood Banks** at its Ninth Annual Meeting, September 3–5, at the Somerset Hotel in Boston.

Dr. Hunter will take office at the Tenth Annual Meeting of the Association, which will be held at the Sherman Hotel in Chicago, November 4–6, 1957.

Dr. Montgomery Blair, Jr. has been appointed to the District Public Health Advisory Council, replacing Dr. Hugh H. Hussey, whose term had expired. Two other new appointees were Mr. Mark Winkler, to succeed Major Omer W. Clark, and Mrs. Edward B. Morris, to fill the unexpired term of Mrs. Henry A. Bartlett, resigned.

The Council elected **Dr. W. Montague Cobb** as its Chairman and Dr. Blair as Vice Chairman.

Rear Admiral Lamont Pugh, who retired August 1, 1956, from a long and distinguished Navy medical career, has been appointed a University Physician to George Washington University. Admiral Pugh will participate in the student health programs of the Health Administration under Dr. Richard B. Castell, Director. Dr. Castell's department maintains a Student Health Clinic on the campus; student health services include medical care and hospitalization in the University Hospital.

Dr. James E. Fitzgerald is one of the first group elected to Advisory Membership in the **American Medical Educational Foundation.** This is a new membership in the Foundation, designees to which are chosen for their "active interest in the Foundation and their prominence in the medical community." From this group will be selected a National Council which will aid and advise the Foundation on the best policies to pursue to assure its success. Dr. Fitzgerald is Chairman of the Medical Society's Committee on Medical Education Fund.

Dr. William D. Dolan, who pioneered the Arlington County cancer detection plan, has received a plaque in recognition of his work from the Arlington Chapter of the American Cancer Society. Dr. Dolan is a pathologist at Arlington Hospital. He is an Associate member of the District Medical Society.

Dr. I. Phillips Frohman was elected a member of the Board of Directors of the American Medical Writers Association at its 13th Annual Meeting in Chicago, September 28. Dr. Frohman is a Fellow of the AMWA and is President of the Mid-Atlantic Chapter of the Association.

Dr. Jacob J. Weinstein was elected to fellowship in the Association at the same meeting.

Dr. Edgar W. Davis has returned from a tour of Western Europe, where he attended the Fourth International Congress on Diseases of the Chest, in Cologne, Germany, August 19–23. Dr. Davis participated in a panel discussion on cardiovascular surgery and delivered a paper on "Solitary Pulmonary Nodules." He was also chairman of a program on pulmonary function.

Subsequent to this meeting, Dr. Davis was a guest at the University of Leeds, in Leeds, England, where he gave a lecture on "Mediastinal Tumors." He participated in a conference at the Brompton Hospital with Sir Clement Price Thomas, and visited Sir Russell Brock's cardiac surgical service. He gave a lecture at the Grove Park Hospital in London on "Silent Carcinoma" and participated in the staff's chest conferences.

Dr. Louis Schwartz took part in a Symposium on Industrial Dermatosis and Poisoning at the 107th Annual Convention of the Indiana State Medical Association, held in Indianapolis, October 15–18. Dr. Schwartz spoke on the subject, "Industrial Dermatology."

At the luncheon meeting, October 18, of the Section on Public Health and Preventive Medicine, Dr. Leroy E. Burney, Surgeon General of the Public Health Service, was present to talk on "Public Health and the Practicing Physician."

Dr. Sol Katz, Chief of the Division of Pulmonary Diseases, District of Columbia General Hospital, presented a paper on "Current Status of Chemotherapy in Pulmonary Diseases," August 24, at a meeting of the West Virginia State Medical Association, held in White Sulphur Springs, West Virginia.

On September 13 he attended a meeting of the West Virginia Tuberculosis and Health Association in Beckley, where he discussed "Tuberculosis in the Aged—A Mounting Problem."

Dr. Wallace M. Yater, Secretary General of the American College of Physicians, attended the Regional Meeting of the American College of Physicians in Charleston, West Virginia, September 29. In addition to discussing scientific papers, Dr. Yater gave an address after dinner that evening on the subject of "The American College of Physicians and the Crisis Facing the Practice of Internal Medicine."

Dr. John Parks, Professor of Obstetrics and Gynecology, George Washington University School of Medicine, gave an address on "Cancer of the Vulva" before the Interstate Postgraduate Medical Association of North America, October 24. The meeting was held in the Municipal Auditorium in Cleveland, Ohio, October 22–25.

Dr. Roy Hertz, Chief of the Endocrinology Branch of the National Cancer Institute, took part in a Symposium on Mammary Cancer at the American Cancer Society's Scientific Session, held at the Park Sheraton Hotel in New York, October 29–30. Dr. Hertz' paper was entitled "Criteria of Response of Mammary Cancer to Endocrine Therapy."

Dr. Edward J. Stieglitz attended the first Pan American Gerontological Conference in Mexico City, September 15–22, and participated in the work of several committees.

On October 14 he addressed the California Aacdemy of General Practice in Los Angeles on "When Should Parents Leave Home?" During his visit to Los Angeles he addressed the staff of Sawtelle Veterans Administration Hospital on "Determination Versus Disability" and the staff of the Sepulveda VA Hospital on "Integration of Variables in Geriatric Medicine."

On October 31, he visited another VA hospital in Martinsburg, West Virginia, and spoke to its staff on "Geriatric Problems."

Dr. Joseph Abrahams, Dr. Alexander Halperin, and Dr. Frieda Fromm-Reichmann are among the staff lecturers for the seminars for practicing psychiatrists offered this fall, beginning October 1, by The Washington School of Psychiatry. Dr. Halperin, who is consultant to the National Institute of Mental Health, will assist in a seminar on "Impasse and Crisis in Psychotherapy." Dr. Fromm-Reichmann's lectures will consider "A Philosophy of Psychotherapy," and Dr. Abrahams', "Group Psychotherapy." Dr. Fromm-Reichmann is Consultant in Psychotherapy to Chestnut Lodge, and Dr. Abrahams is Consultant to the National Training School, St. Elizabeths Hospital, and the Washington Institute of Mental Hygiene.

Dr. Charles S. Coakley and Dr. Salomon N. Albert participated in the meeting of the American Society of Anesthesiologists in Kansas City, Missouri, October 8–12. At the General Scientific Session, October 12, Dr. Albert, who is Director of the Department of Anesthesiology, District of Columbia General Hospital, presented a paper on "Observations on Blood Volume Changes by Serial Determination with Radioactive Isotopes in a Simplified Technic," which was co-authored by Drs. William A. Spencer, Murray Finkelstein, Seymour Alpert and Charles S. Coakley, of the Departments of Anesthesiology of the District of Columbia General Hospital and the George Washington University Hospital.

"Work in Progress" sessions were held concurrently with the scientific sessions. On October 10, Dr. Coakley, who is Professor of Anesthesiology at George Washington University, presented a paper before a "Work in Progress" session entitled, "A Study of Drugs Used for Preanesthetic Medication," which was co-authored by Drs. Harold N. Eccleston and Francisco N. Aguilar, of the Department of Anesthesiology, George Washington University Hospital.

Dr. Edward Adelson prepared a paper on "Platelet Survival Studied by Tagging with Radioactive Phosphorus" for the meeting of the International Society of Hematology, in Boston, August 28. The paper was co-authored by Dr. Jack J. Rheingold and Colonel William H. Crosby.

Dr. Adelson also presented a paper on "Changes in Hemostasis after Dextran Infusions" before the International Society of Transfusion, also held in Boston, September 4.

Dr. Edward D. Freis, Adjunct Clinical Professor of Medicine, Georgetown University School of Medicine, **and Dr. W. Proctor Harvey,** Assistant Professor of Medicine, also of Georgetown, were members of the guest faculty for the Postgraduate Course on Recent Advances in Cardiovascular Diseases, sponsored by the American College of Physicians and held at the Mount Sinai Hospital, New York, October 8–12. Dr. Freis presented the topic, "Drugs in Hypertension. Status of Ecolid and Inversine." Dr. Harvey read a paper entitled, "Clinical Aspects of Severe Aortic Insufficiency and Case Selection for Surgery."

Dr. Lawrence E. Putnam addressed the medical staff of the Hadley Memorial Hospital, September 27, on the subject, "Anaphylactoid Reactions from Antibiotics."

A second **Industrial Nursing Institute,** sponsored by the Catholic University of America, the American Association of Industrial Nurses, and the Metropolitan Washington Industrial Nurses' Association, was held on October 26 and 27. The theme of the Institute was "You and Your Job."

Among the physicians who participated in the program were **Drs. R. S. Donnally, Frank W. Konzelmann, Henry P. Laughlin, R. Lomax Wells, and Leon Yochelson.**

Dr. Ernest A. Gould addressed the class of graduating nurses of Garfield Memorial Hospital School of Nursing at exercises held at the District Chapter House of the American Red Cross, September 7. There were 18 nurses in the class.

Dr. John W. Cronin, Chief of Medical and Hospital Facilities for the United States Public Health Service, gave the commencement address for 16 graduates of the Alexandria Hospital School of Nursing the same evening. The meeting was held in the First Baptist Church in Alexandria.

Dr. George E. Schreiner, of Georgetown University, described some of his work with the artificial kidney at the first of the Clinic Luncheons of the medical staff of Alexandria Hospital. The luncheon meeting was held at the Old Club Restaurant in Alexandria, October 2.

Dr. Maxwell Boverman, Clinical Assistant Professor of Psychiatry, Georgetown University School of Medicine, addressed the medical staff of Sheppard and Enoch Pratt Hospital, Towson, Md., October 16. His subject was "The Acute Paranoid Psychosis and Its Psychotherapy."

Dr. Sydney Ross returned recently from Mexico City where he presented two papers before the staff of the Hospital Infantil. The papers were entitled "The Management of Diarrheal Diseases in Infants and Children" and "The Treatment of Bacterial Meningitis."

Dr. Edward Young Davidson has moved to the Eastern Star Home, 6000 New Hampshire Avenue, N. E. He is presently in the Infirmary and would be very much pleased if members of the Society would call. The visiting hours are from 2:30 to 4 p.m. and from 6:30 to 8 in the evenings.

Dr. Walter Freeman will be in Washington the last of this month and plans to fly to Lisbon, Spain, with Mrs. Freeman early in December. They will stay in Lisbon for a week or so before going on to London, where Dr. Freeman has been invited to give a paper on the subject, "Twenty Years of Leucotomy."

Dr. Freeman writes that plans are now well under way for the construction of a 200-bed hospital near his home at Los Altos, California, which will be called the El Camino Hospital. He will serve as its first Chief-of-staff.

Three Active members and one Associate have resigned from the Medical Society because of removal from Washington.

Dr. Muriel S. Sowers' address is now 425 North Fulton Street, Fresno 1, Calif.

Dr. Samuel S. Morrison, formerly of the Washington Clinic, is associated with the Foss Clinic of the Goerge F. Geisinger Memorial Hospital in Danville, Pa.

Dr. Eugene de Savitsch is living in London, and because of ill health will not return to Washington to resume his practice of surgery. His address is 24 Old Court Mansions, London W.8, England.

Dr. Seward E. Miller was an Associate member of the District Medical Society while Chief of the Division of Special Health Services, PHS. On September 1, he took over new duties at Ann Arbor, Michigan, where he is Director of the Institute of Industrial Health at the University of Michigan Hospital.

BOOK REVIEWS

A Follow-up Study of War Neuroses. VA Medical Monograph. NORMAN Q. BRILL, M.D., Professor of Psychiatry and Superintendent and Medical Director, The Neuropsychiatric Institute, University of California School of Medicine, Los Angeles, California; AND GILBERT W. BEEBE, PH.D., Statistician, Follow-up Agency, Division of Medical Sciences, National Research Council, Washington, D.C. Pp. 393. Washington 25, D.C.: Veterans Administration, 1955.

This is a technical, statistical study of a Veterans group who incurred psychiatric illness during military service. The data are well worked out; and the research design does take cognizance of the numerous factors involved, such as adequate records of preservice, military, and postservice personality, plus the factor of pensions and examinations for pensions.

This book is not a definitive answer to the question of psychiatric illnesses in the military service, but it does contain interesting material for physicians involved in military or Government medicine.

ROBERT P. NENNO, M.D.

The Morphology of Human Blood Cells. L. W. DIGGS, M.A., M.D., Professor of Medicine and Director of Medical Laboratories, University of Tennessee and City of Memphis Hospitals; Consultant in Hematology, Armed Forces Institute of Pathology, Washington, D. C.; DOROTHY STURM, Instructor, Memphis Academy of Arts; AND ANN BELL, B.A., Instructor in Medicine, University of Tennessee. Price, $12.00. Pp. 181, with 54 illustrations. Philadelphia: Saunders, 1956.

Although intended as an atlas, almost two-thirds of this publication is devoted to an excellent discussion of cells in specific and in general. Emphasis has been placed on the characteristics of individual cells and on differential morphology rather than on disease entities and conditions. The majority of the color plates are drawings of the rather typical cell of the series, and for the most part are quite representative.

At first, a complete review of normal cells and their precursors are shown, together with most all of the pathologic varieties. In addition to the atlas section of the drawings, there are other supplemental photomicrographs, as well as the excellent commentary. The various cells of the leukemias, infectious mononucleosis, abnormal variants of leukocytes, such as seen in pernicious anemia, infection, and the cells of the various lipoid storage diseases are shown in detail. There is also a section dealing with the formation and structure of the *Lupus erythematosis* cell. To make this complete, the final section deals with technics and methods in use in most hematologic laboratories.

This atlas is recommended for use routinely by doctors and technicians who see blood smears daily and who could well utilize a readable guide in the differential morphology of the more unusual cells.

J. FREDERICK BARR, M.D.

The Management of Menstrual Disorders. C. FREDERICK FLUHMANN, B.A., M.D., C.M., Clinical Professor of Obstetrics and Gynecology, Stanford University School of Medicine, San Francisco, California; Assistant Visiting Obstetrician and Gynecologist, Stanford-Lane Hospitals; Courtesy Staff, Children's and Mount Zion Hospitals, San Francisco, California; Fellow, American Gynecological Society; Past President, San Francisco Gynecological Society and Pacific Coast Obstetrical and Gynecological Society. Price, $8.50. Pp. 350, with 121 illustrations. Philadelphia: Saunders, 1956.

The title of this book does not do justice to the contents. The author has prefaced the chapters on clinical management with considerable background literature, including a scholarly review of present knowledge of the physiology and pathology of the human reproductive cycle.

Some of the illustrations and certain sections appeared in an earlier work by the same author in 1939. Actually, less than half of the book is devoted to clinical management.

The book begins with a historical review of early concepts of menstruation dating back to Pliny (A.D. 23-79). There follows a reminder of what has been learned from a comparative study of the sexual phenomena of other mammals, and a detailed description of systemic as well as sexual organ changes during the human menstrual cycle. The gonadotropins and steroid hormones are discussed in separate chapters.

While the author adds nothing new to current management of menstrual disorders, he has done a superb job of bringing together in one volume nearly all of the diagnostic and therapeutic procedures for these disorders known to date. His years of teaching and clinical experience in gynecology make his critical appraisal of these procedures extremely valuable. He has taken particular pains to point out what are considered controversial treatments, such as the use of gonadotropins to induce ovulation or the use of sex hormones for premenstrual tension. Dysmenorrhea and the climacteric receive the detailed attention they deserve. And what is more important, the author constantly impresses on his readers the need to treat the "whole patient," not isolated organs.

Dr. Fluhmann emphasizes that the bibliography was necessarily limited to representative reports. But the many references listed after each chapter are mute testimony of the extensive compilation of opinion presented.

The wide variation in results of many of the statistical studies quoted, together with poor results reported from treatment of some of these menstrual disorders, leaves one with the distinct impression that there is need for further study and creative research in this field.

The book is well printed on an excellent quality of paper and is well bound. It is up-to-date and gives a comprehensive review of the subject. It is well indexed for ready reference.

JOSEPHINE E. RENSHAW, M.D.

Proceedings, World Congress of Anesthesiologists, Scheveningen, The Netherlands, September 5–10, 1955. Edited and Published by the International Anesthesia Research Society. Pp. 321. Minneapolis: Burgess Publishing Company, 1956.

This is a collection of 114 papers presented before the First World Congress of Anesthesiologists, held in The Netherlands, in September, 1955. Approximately one-half of the papers deal with research material, both laboratory and clinical; the remainder deal solely with clinical anesthesia as it is practiced in operating rooms all over the world today. The authors represent more than 20 countries, and although the original papers were presented simultaneously in 3 languages, the English translations appearing in this book are excellent and the inclusion of most of the diagrams and sketches makes them quite easy to follow.

Of particular interest are the Panel Discussions on Physiology, Artificial Hibernation and Hypothermia, and Hypotension, all exceptionally well covered and presenting the latest thinking on these controversial subjects.

This book is highly recommended to all anesthesiologists and those interested in clinical pharmacology and physiology. It is particularly good for those of us who are in the habit of reading journals from only one or two countries to realize that our problems are worldwide and to learn how they are managed in such places as Italy, Turkey, Czechoslovakia and even Soviet Russia!

JOHN J. LEAHY, M.D.

Therapy of Fungus Diseases—An International Symposium, presented June 23, 24, 25, 1955, by The Division of Dermatology, Department of Medicine, School of Medicine and Medical Extension, University Extension, University of California at Los Angeles. Edited by THOMAS H. STERNBERG, M.D., Professor of Medicine (Dermatology) and Assistant Dean for Postgraduate Medical Education, AND VICTOR D. NEWCOMER, M.D., Associate Professor of Medicine (Dermatology). Price, $7.50. Pp. 337. Boston: Little, 1955.

This important book is the result of an international symposium held under the auspices of the Division of Dermatology, Department of Medicine, University of California at Los Angeles, in June 1955. Over 200 leading scientists participated in this meeting and 55 papers make up this symposium. These collected papers provide an up-to-date review as well as a summary of the world's knowledge of both superficial and deep fungus infections, particularly in regard to therapy. While the contributors are mainly mycologists, bacteriologists and dermatologists, the information will be of interest to the internist, pediatrician, gynecologist, Public Health officer, as well as to all physicians who desire to understand and to better use the multiple antibiotics available today.

Much previous unpublished data are presented on the recently established antifungal antibiotic, nystatin (mycostatin), which we are hearing a great deal about, both as a treatment for fungus diseases as well as a preventive agent to combine with antibiotics. Of particular interest are the papers on moniliasis, histoplasmosis and coccidioidomycoses, as well as discussions on a great number of new antifungal agents, including the antihistamines, sulfonamides and the stilbamidines (which are also being used in the treatment of tic douloureux).

The biological aspects of fungus diseases are discussed from many points of view, including effects of

ACTH, cortisone, testosterone, estrogens, etc. What is even more stimulating and interesting are the still unanswered questions which are raised as the result of this symposium. What are the modes of transmission and reservoirs of the pathogenic fungi? How do the superficial fungi produce harmful effects and why is topical therapy for the superficial mycosis so ineffective? What are the host-parasite relationships that cause such puzzles as the reason why fungi of the feet is rare in children, uncommon in adult females, and common in adult males? The research physician as well as the practicing physician will be stimulated to think more clearly in regard to fungus diseases by this volume. However, this book is not a Merck Manual to be consulted by the physician who sees a fungus disease and desires a 5-minute treatment summary, but rather, this volume is an invitation and a stimulation to study the many interesting facets of fungus diseases.

ALVIN SELTZER, M.D.

Ciba Foundation Symposium on Extrasensory Perception. G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.CH., AND ELAINE E. P. MILLAR, A.H.W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $6.00. Pp. 240, with 3 illustrations. Boston: Little, 1956.

This work is a compact survey of scientific thought relating to the field of mental telepathy and clairvoyance. It is really more of a philosophy of ESP than an attempt at scientific proof of it. As suggested by the authors themselves, the scientific proof of ESP should be sought in the original papers. This book, for the most part, accepts ESP as an established fact.

There is considerable discussion of the validity of the various experimental and experiential approaches to ESP. Some new phenomena are presented—some of anecdotal type and others of more scientific bent. There is some interesting discussion of the admissibility of the former material as true ESP phenomena.

One of the most interesting and understandable sections of this volume is concerned with the possibility of establishing a relationship between ESP and the "homing" factor in birds. This also appears as the most controversial section of the book, with 2 contributors presenting quite conflicting views.

One of the book's greatest weaknesses is its lack of either experimental argument or logical proof for many of the statements made. One gets the impression that statements are true simply because they are said to be true. For example, the question of statistical analysis of data is answered in such an authoritarian manner. Of course, one may go to other articles for mathematical and experimental proof of applicability of the binomial theory to ESP. However, such a presentation leaves the reader in about the same position he was when he started; i.e., he already accepts ESP, and is in agreement with the authors, or he does not accept ESP, and remains of the same mind after reading this book.

ROBERT P. ODENWALD, M.D.

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional current books which, in their opinion, merit comment.

Proceedings, World Congress of Anesthesiologists, Scheveningen, The Netherlands, September 5–10, 1955. Edited and Published by the International Anesthesia Research Society. Pp. 321. Minneapolis: Burgess Publishing Company, 1956.

Observations on Krebiozen in the Management of Cancer. A. C. IVY, PH.D., M.D., Distinguished Professor of Physiology and Head of the Department of Clinical Science, University of Illinois, and formerly Executive Director of the National Advisory Cancer Council and Director-at-large of the American Cancer Society; JOHN F. PICK, S.B., M.M., M.D., Head of Department of Plastic Surgery, Columbus Hospital, Chicago, and formerly Assistant Clinical Professor of Surgery, University of Illinois; AND W. F. P. PHILLIPS, M.D., Department of General Practice, St. Francis Hospital, Evanston, Illinois. Price, $2.50. Pp. 88, and 9 tables and 5 illustrations. Chicago: Henry Regnery Company, 1956.

Of Water, Salt and Life. An Atlas of Fluid and Electrolyte Balance in Health and Disease. Lakeside Laboratories, Inc. Price, $7.50. Pp. 70 with 31 color plates. Milwaukee: Lakeside Laboratories, 1956.

Roentgen Signs in Clinical Diagnosis. ISADORE MESCHAN, M.A., M.D., Professor and Director of the Department of Radiology at the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina; formerly Professor and Head of the Department of Radiology at the University of Arkansas School of Medicine, Little Rock, Arkansas, with the assistance of R. M. F. FARRER-MESCHAN, M.B., B.S. (Melbourne, Australia). Price, $20.00. Pp. 1058, with 2216 illustrations on 780 figures. Philadelphia: Saunders, 1956.

Ciba Clinical Symposia, Vol. 7. J. Harold Walton, M.D., Editor. Pp. 198. Summit, N. J.: Ciba Pharm. Products, 1955.

Ciba Foundation Colloquia on Ageing. Volume 2. Ageing in Transient Tissues. G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H.W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $6.75. Pp. 263, with 96 illustrations. Boston: Little, 1956.

Ciba Foundation Colloquia on Endocrinology. Volume 9. Internal Secretions of the Pancreas. G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecillia M. O'Connor, B. Sc., Editors for the Ciba Foundation. Price, $7.00. Pp. 292, with 100 illustrations. Boston: Little, 1956.

CARL HENNING, M.D.

(1880–1956)

Dr. Carl Henning, Washington ophthalmologist for 46 years, died suddenly in his home at 32 Henlopen Avenue, Rehoboth Beach, Delaware. Dr. Henning retired in May, 1953, and moved to Rehoboth, where he and Mrs. Henning had spent their summers for many years. He had established a small practice at Rehoboth Beach.

Dr. Henning was born in Beaver Falls, Pennsylvania, January 3, 1880. He grew up in Fargo, North Dakota, where his father, Dr. John D. Henning, was in practice. His mother was Mary Sterrett Henning.

Dr. Henning was graduated from the old Columbian (now George Washington) University School of Medicine in 1905 and served as resident physician at Episcopal, Eye, Ear and Throat Hospital. He went abroad for postgraduate study in ophthalmology in Vienna in 1906, and opened his offices for the practice of ophthalmology in the District of Columbia the following year. His offices in Washington were located at 1752 Massachusetts Avenue, N. W., where he had been associated in practice for many years with Dr. Sterling Bockoven. He was one of a group of young doctors who studied under Dr. William Holland Wilmer, internationally known ophthalmologist, who later became Director of the Wilmer Institute of Johns Hopkins University.

Dr. Henning was commissioned Captain in the Army Medical Corps during World War I and served from 1917 to 1919.

During his long practice in Washington he was attending surgeon at Episcopal Eye, Ear and Throat Hospital, and consultant to Columbia, Sibley and Veterans Administration (Mt. Alto) Hospitals. Upon his retirement he was made a member of the Emeritus Staff of Episcopal.

He became affiliated with the Medical Society of the District of Columbia in 1908 and a Life member in 1949. He was Past President of the Clinical Club of Washington, and a member of the American Medical Association and the American Academy of Ophthalmology and Otolaryngology. He was also a member of the Kiwanis Club, the University Club and the Army-Navy Club.

Surviving him are his wife, Mrs. Marion Dilcer Henning, and a sister, Mrs. George T. Fillius, of 4300 Hawthorne Street, N.W., Washington, D. C.

Anorexia Nervosa—Cole

(*Continued from page 615*)

26. Pardee, I.: M. Clin. North America, 1941, **25,** 755.
27. Anderson, in letter to Gull, W. W.: See ref. 6.
28. Stunkard, A. J.: Ann. New York Acad. Sc., 1955, **63,** 4.
29. Waller, J. V., Kaufman, M. R., and Deutsch, F.: Psychosom. Med., 1940, **2,** 3.
30. Osler, W., cited by Clow, F. E.: See ref. 16.
31. Birnie, C. R.: Lancet, 1936, **2,** 1331.
32. Dubois, P., cited by Clow, F. E.: See ref. 16.
33. Mitchell, W., cited by Clow, F. E.: See ref. 16.
34. Farquharson, R. F., and Hyland, H. H.: J.A.M.A., 1938, **111,** 1085.
35. Harrison, T. R.: Principles of Internal Medicine, 2nd ed. New York: Blakiston, 1954, p. 596.
36. Leede, C. S., cited by Clow, F. E.: See ref. 16.
37. Dunn, C. W.: Lancet, 1937, **1,** 723.
38. Kyle, L.: Lecture at Georgetown University School of Medicine, 1956.
39. Diagnostic and Statistical Manual: Mental Disorders. Washington, D. C.: Am. Psychiat. Assoc., 1952.
40. Noyes, A. P.: Modern Clinical Psychiatry, 4th ed. Philadelphia: Saunders, 1954.
41. McCarthy, D. J., and Corrin, K. M.: Medical Treatment of Mental Disease. Philadelphia: Lippincott, 1955.
42. Strecker, E. A., Ebaugh, F. G., and Ewalt, J. R.: Practical Clinical Psychiatry, 7th ed. New York: Blakiston, 1951.
43. Brill, A. A., cited by Pardee, I.: See ref. 25.
44. Rahman, L., Richardson, H. B., and Ripley, H. S.: Psychosom. Med., 1939, **1,** 335.
45. Bruch, H., cited by Stunkard, A. J.: See ref. 28.
46. Bruch, H.: Ann. New York Acad. Sc., 1955, **63,** 68.
47. Kahn, E., cited by Pardee, I.: See ref. 25.
48. Hertz, S., and Means, J. H., cited by Stunkard, A. J.: See ref. 28.
49. Dejerine, cited by Clow, F. E.: See ref. 16.
50. Gillespie, R. D.: Lancet, 1931, **1,** 995.

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

VOLUME XXV *December*, 1956 NUMBER 12

EXPERIMENTAL EVALUATION OF A DIVIDED ROLLING MATTRESS FOR SPINAL TRACTION*

GEROLD KLEIN, M.D.
Resident in Surgery, Garfield Memorial Hospital, Washington

THE EFFECTIVENESS of traction therapy to the spine is still controversial. It is believed that little actual traction is possible to the vertebral column, with the exception of the cervical spine, and that traction is chiefly used as a means to further immobilize the patient. The purpose of this paper is to present a method by which effective traction can be obtained at different levels of the dorsolumbar spine.

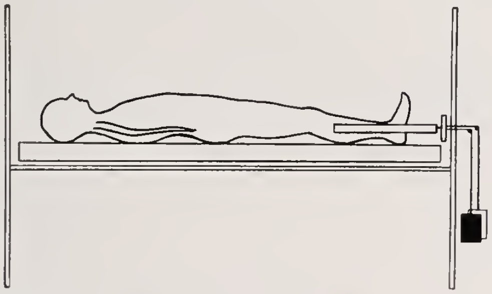


FIG. 1. Usual method of bilateral leg traction.

The indication for traction is chiefly the conservative therapy of mechanical irritations of the neural structures along the spinal column.

The method commonly used at present for traction therapy to the spine is bilateral leg traction (figure 1). It consists of 5 to 10 lbs. weight attached by adhesive tape to the skin of each leg, occasionally up to the thighs, with the intention of producing a caudally distracting effect at the level of the spinal lesion. The patient lies flat on his back on a horizontal mattress or may have the head of the mattress elevated and his knees slightly bent in the semi-Fowler position.

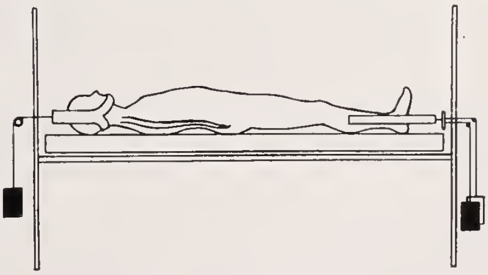


FIG. 2. Usual method of countertraction.

Countertraction is sometimes attempted by weight attached to the patient's head by means of cervical traction (figure 2).

---

* Presented at the Seventh Annual Staff Dinner of Garfield Memorial Hospital, April 30, 1956. This paper won first prize in the annual essay competition of the resident staff for the Harry Hyland Kerr Awards for 1956.

Another method of countertraction is often tried by elevation of the foot-end of the bed, in the expectation that the weight of the patient's body on a declining plane will effect traction at the level of the spinal lesion.

The practical results of these types of traction therapy to the spine are often so discouraging that their therapeutic value is seen only in the partial temporary immobilization of the patient.

It is obvious that by these methods the weight of the patient's body between the spinal lesion and the location of the application of the traction eliminates a considerable amount of applied weight-pull through friction with the mattress. This is substantiated clinically by the frequently encountered complaint of the patients in traction that they feel a pull in the legs, especially in the knee and hip joints, but practically none or very little at the level of the spinal lesion. An exact measurement of the actual traction force at the desired spinal level may be determined by the following method.

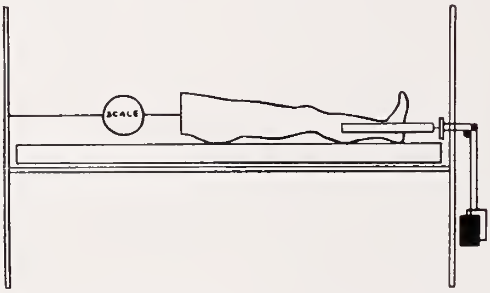


Fig. 3. Divided plaster body with bilateral leg traction, the pulling force being measured by a scale attached to the cranial end.

A plaster mold of a human body is made, having the same contact surfaces as a patient while in bilateral leg traction. This plaster body, weighing 100 lbs., is divided vertically at the level of the hypothetical spinal lesion, the mid-lumbar spine (figure 3). The caudal part of the plaster body, weighing 60 lbs., is placed on a firm mattress with a bedboard underneath. A scale is attached to the cranial end of the caudal part of the plaster body which measures any force pulling caudally at the mid-lumbar level. A regular bilateral leg traction is applied, starting with 5 lbs. on each leg. No pulling force is measurable at the mid-lumbar level. Increase of the traction weight on each leg to 10 lbs., the maximum weight used in the average traction therapy, still does not produce any pulling force at the level of the alleged spinal lesion.

In a similar way the countertraction of weight applied to the head by means of the commonly used cervical traction is tested and found to be completely ineffective in the mid-lumbar spine. The weight of the cranial part of the plaster body on a cranially declining mattress does not show any traction at the spinal level either.

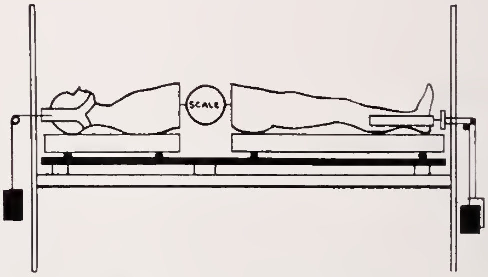


Fig. 4. Mattress placed on rollers and divided under hypothetical spinal lesion, with scale between divided parts of plaster body, with caudal and cranial traction.

These tests prove that the commonly used bilateral leg traction, with or without countertraction, does not produce the desired traction effect. Friction between patient and mattress prevents the transmission of the traction force of the weights to the spinal lesion.

The friction obviously must be eliminated if traction is to become effective at the spinal level. Methods of separating the mattress from the patient are neither practical nor comfortable. However, a simple unit can be constructed by taking advantage of the friction between the patient and the bed. The unit, patient plus mattress, can be placed on rollers which slide on the underlying bedboard with a minimum of friction, and the pulling force applied to any level of the unit will be transmitted with a minimum of loss to any region desired.

To prove this theory the above-described tests are repeated, except that the mattress is placed on rollers and divided under the hypothetical spinal lesion, the same level as the division in the plaster body lying on the mattress (figure 4). Thus, the portion of the body caudal to the lesion and the caudal part of the mattress form the "caudal unit" and the cranial portion of the body with the cranial part of the mattress forms the "cranial unit." Both units slide separately with their rollers on the horizontal basal bedboard in the direction the pulling force is applied. This method transmits 80 per cent of the weight traction to the desired level of the spine, compared to 0 per cent by the commonly used methods.

The level of the spine on which traction should be centered can be selected by placing the division line at the desired level.

The divided rolling mattress also offers the possibility of eliminating the discomfort caused by attachment of weights to the legs and head. By raising the basal bedboard at the line corresponding to the division of the mattress, the cranial and the caudal units rest on two oppositely declining planes (figure 5). The weights of the two units now rolling in opposite directions produce a distracting force at the division of the mattress and, because of the friction between patient and mattress, also at the spinal level above it. Any desired amount of traction can be obtained by changing the angles of declination. The attached weights thus become unnecessary.

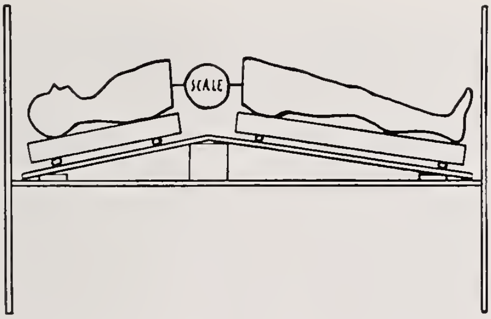


Fig. 5. Divided rolling mattress raised at location of spinal lesion without application of weights being necessary.

The angulation of the sliding planes results in hyperextension of the spine at the level to which traction is transmitted. This is sometimes desirable in flexion fractures and certain neural irritations. Other types of spinal lesions, however, demand traction with the patient in horizontal or flexed position.

To obtain flexion of the patient without losing the traction effect, a pair of plywood boards may be attached by hinges under the centrally divided mattress at the line of division (figure 6). The rollers are then placed underneath these attached boards. The patient can now be flexed by elevation of the head and foot ends of the two mattress parts from the attached boards with angulation at the hinges. The traction effect of the units is maintained by the attached boards which remain rolling in opposite directions on the declining planes.

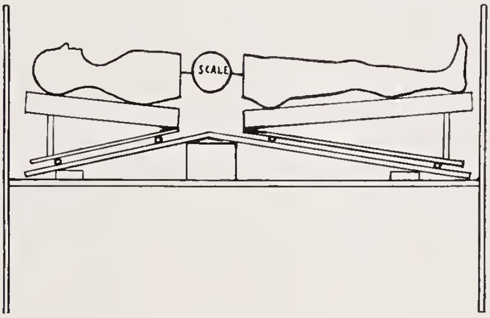


Fig. 6. Flexion by elevation of head and foot ends of divided rolling mattress by means of hinged plywood boards.

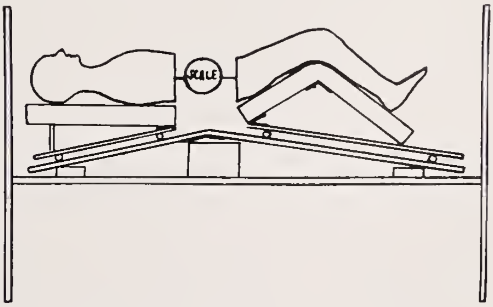


Fig. 7. Elevation of caudal portion with knees bent, cranial portion remaining horizontal.

Since friction between patient and mattress has an arresting effect only on horizontal or moderately angulated mattress parts, extreme elevation to obtain increased hyperflexion may result in gliding of the patient on the mattress surfaces toward the level of flexion. Thereby the traction effect of the divided rolling mattress may be diminished or eliminated at the spinal lesion. Extreme hyperflexion therefore has to be provided by leaving the cranial part of the patient horizontal and elevating only his caudal portion to the desired flexion angle (figure 7). Gliding is now prevented by flexing the knees over a downward angulation in the caudal part of the mattress. Extreme hyperflexion of the patient is so obtained, with the traction effect of the divided rolling mattress fully effective at the spinal lesion.

It has been experimentally demonstrated why the commonly used methods of traction therapy to the dorsolumbar spine are relatively ineffective. A new traction device is suggested which produces an actual distracting force at the desired spinal level with the patient in hyperextension as well as in hyperflexion, eliminating also the need of traction weights.

This report is primarily an objective presentation of the mechanical advantages of the traction mattress. It is hoped that it will serve as a valuable adjunct to present methods of treating certain mechanical nerve root irritations. It has been used clinically at the Garfield Memorial Hospital. To date the clinical results have been encouraging and have resulted in further development of design and application. A detailed clinical evaluation is now being carried out at the Hospital and will be reported in the near future.

N.B. The frame will be manufactured about January 1, 1957 by the Zimmer Manufacturing Company, Warsaw, Indiana.

A DIAGNOSTIC CASE PROBLEM

DANIEL HENRY CONNOR, M.D.

Resident in Pathology, George Washington University Hospital

This (figure 1) is the X-ray film of the chest on admission of a 91-year-old white man. He had been well until about 6 months before admission when he gradually became short of breath and weak, and began to lose weight. During this time he also began to have a cough productive of small amounts of white, frothy sputum. On physical examination, respirations were labored and fast, and coarse breath sounds were heard over the entire thorax.

On several occasions in the Hospital, usually in the late afternoon, the patient's temperature rose to between 99° and 100°F. Except for these slight elevations his temperature was normal. There were no other significant findings. Complete blood counts and urinalyses were within normal limits. Repeated smears and cultures of sputum and gastric washings were negative for acid-fast bacilli.

WHAT IS THE DIAGNOSIS?

(*See page 672*)

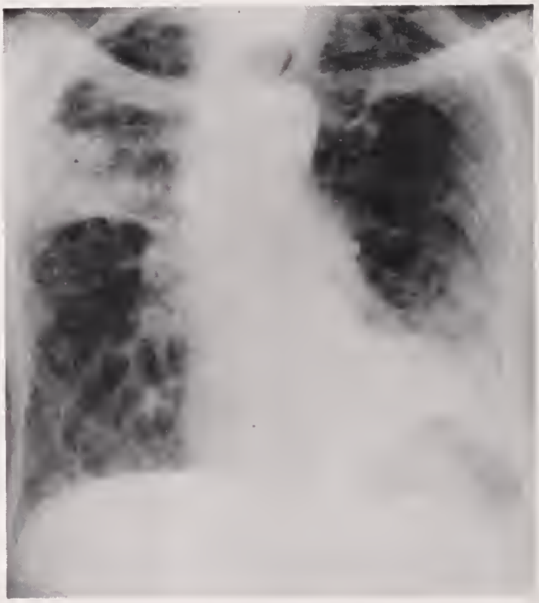


FIG. 1. Case of 91-year-old man.

EMERGENCY MEDICAL SERVICES IN DISASTER*

HARRY B. WILLIAMS
JEANNETTE F. RAYNER

Technical Director and Staff Associate, respectively, Committee on Disaster Studies, National Academy of Sciences—National Research Council

STUDY of recent major disasters indicates that serious problems exist for medical personnel and hospitals in carrying out their function of medical care. Many of these problems, such as transportation and communication, are related to the community disorganization caused by disaster. To illustrate, we present the experiences of a hypothetical Dr. Smith during the hours following a tornado disaster. Later, we shall identify and analyze these experiences as human behavior and organizational problems.†

Dr. Smith in Disaster

It was 5:30 in the evening. Dr. Smith, just home from his office, was relaxing for a few minutes before dinner. The radio was tuned to his usual news station; family activity pervaded the house. The comfortable noises of home settled about him and he dozed. A few minutes later his meditation was shattered by a radio report that Plainview, a suburb 2 miles distant, had been struck by a tornado. The announcer went on to say that the report had not been confirmed by official sources and that the station would present an official report as soon as possible. Dr. Smith rose from his chair. The bulletin about the tornado worried him. However, if the bulletin were fact and not rumor his hospital would notify him. Having made this decision, he returned to his chair. Five minutes later the piercing wail of a siren was followed by a second bulletin requesting all doctors and other medical personnel to report to their respective hospitals. Dr. Smith, triage officer for City Hospital, departed immediately for the hospital.

At 5:50 a car drove up to the emergency entrance of City Hospital and deposited 2 dazed and bleeding men. Within a minute 2 more vehicles drove up and left 5 more injured. These last and the next few that came were treated as routine emergencies by the accident room staff. It was not long, however, before people started coming so fast that the staff realized a major disaster had occurred. These first patients and those accompanying them were not able to tell what had happened, nor had they any information about the extent of damage. During the next half hour, quiet, orderly City Hospital became a focal point for the injured, for people frantically searching for loved ones, and for volunteers and other people trying to find out what had happened. The lobbies, halls, and emergency room became a teeming mass of humanity.

Dr. Smith's home was not far from the hospital, but it was necessary for him to drive through a small section of the devastated area in order to reach the hospital. He made good time until he neared the periphery of the disaster area. Here he was to encounter one of the most frustrating and difficult situations in his entire disaster experience. It seemed as if every human being that owned a car was proceeding to the disaster area. Passage through the tornado-torn street was possible for one lane of traffic, but some of the earliest arrivals on the scene had parked their cars in this lane and hustled off to help rescue the trapped and injured. Traffic was at a complete halt. Here and there people were standing gazing at the ruin around them. Their clothing was torn and mud-streaked, and some, to the doctor's practiced eye, were obviously injured. Dr. Smith pulled his car to the side of the road, got out and went over to a woman who was sitting on what had once been the lawn of her home. He told her that he was a doctor and he could help her. She gazed at him as though he were a strange creature, which indeed he appeared among the rubble and broken humanity, and replied that she was all right, didn't feel any pain. Actually, she had suffered a severe compound fracture of the humerus. A large wound exposed the radial artery. After searching for some minutes, Dr. Smith found a piece of curtain to fashion a tourniquet. He applied it to her arm, made her as comfortable as he could, and then turned to help others. For an hour Dr. Smith examined, improvised, and gave as much first aid as was possible in the situation. Realization of the magnitude of the medical problems, the frustration engendered by working without sufficient first-aid supplies, together with the anxiety provoked by nagging thoughts that he ought to be at the hospital where he could be of far greater value, prompted him to seek someone else to administer first aid. It was with considerable relief that he met one of the hospital nurses.

---

* Presented at the first Course in Disaster Medicine, sponsored by the Medical Society of the District of Columbia, May 21–25, 1956.

† For a more complete analysis of problems of emergency medical care in disaster see: Raker, J. W., Wallace, A. F. C., and Rayner, J. F., with the collaboration of Eckert, A. W.: Emergency Medical Care in Disasters: A Summary of Recorded Experience. Washington, D.C.: National Academy of Sciences-National Research Council, Committee on Disaster Studies, Publication 457, July 1956.

By the time Dr. Smith returned to his car the police had arrived and traffic was moving slowly. A cordon had been established around the area, and an effort was being made to stop the flood of people moving into the area. The next half hour found him alternately resigned and anxious as he detoured to the hospital, a trip usually requiring 5 minutes from the point where he had stopped to give first aid.

Dr. Smith's experience of the previous hour and a half partially prepared him for the sight that greeted him as he approached the hospital. Swarms of people thronged the grounds, walks, drive and doors. Ambulances were lined up in the drive. Casualties had overflowed onto the grounds. Inside where the most seriously injured had been taken, noise and confusion held sway. Injured had been placed on the floors, on benches, desks, stretchers and litters. Crowds of people were wandering about; some, desperately seeking loved ones, looked under blankets and stepped over others; some were trying to assist the staff. In the emergency room, casualties seemed almost stacked upon one another. There was an incredible variety of injuries—fractures, lacerations, and crushing injuries. A dead victim lay in a corner on the floor. Mingled with these were a few with minor injuries passively waiting to be cared for and a number of people who appeared to be uninjured. Some were being given intravenous solutions for shock. The atmosphere was tense and urgent.

Because of Dr. Smith's late arrival, others had been forced to assume his duty of triage. However, no organized system of triage had been set up. Patients were being sorted by the same people who treated them; there was much duplication of effort; and no single person had been invested with authority or responsibility for triage. Dr. Smith immediately perceived that unless those with minor injuries were segregated from the more seriously wounded before admission to the already overcrowded emergency room, the situation would remain confused and hopelessly chaotic. He therefore stationed his chief resident at the ambulance entrance to carry out the initial sorting. Momentarily this eased the situation, but the hospital had 2 other entrances and, since no one had thought to post a triage officer at these doors, it was not long before the advantage gained was lost. The emergency room was invaded from the rear, so to speak. Dr. Smith sent 2 interns to remedy this situation but realized that the real solution to the problem lay in setting up a first-aid station away from the hospital areas where the seriously injured were treated. Two medical students and 2 student nurses were then assigned to a first-aid post remote from the emergency room.

About the time things were getting under control, Dr. Smith found himself swamped in a new wave of people. These were people volunteering to give blood. Blood supplies were ample at the time, and the Red Cross had already assured the hospital administrator that they could bring in more units when needed. However, one of the city officials had stopped by the hospital and decided, independently, that more blood would be needed. Without consulting anyone else he had asked the radio station to broadcast an appeal for blood donors. Nearly 2,000 persons responded. These people wanted to help and were reluctant to be turned away. It was decided that for the sake of good public relations an attempt must be made to bleed them. A bleeding team was assembled, and a station was set up across the street in the nurses' home.

Throughout this period Dr. Smith found himself coping with all sorts of problems never encountered in his daily hospital experience. There was a host of volunteers, all eager to be of assistance. A few were trained and worked at the hospital the year round. They were very helpful. But more had no familiarity with the hospital or its routine. These proved a nuisance. If they were sent to get supplies, they either got lost or deviated from their assigned task. They had to be shown in great detail what to do, and supervised very closely. Activity of all sorts, from the washing and bandaging of a cut finger to the most complex surgery, was characterized by great urgency, and this feeling persisted long after the last casualty had been admitted. Hours seemed minutes, problems solved seemed replaced by twice their number, 6 casualties seemed to take the place of the 1 just cared for. Dr. Smith found himself at one point responding to this sense of urgency and wondered if it in part resulted from the overwhelming numbers of people rather than from what actually had to be done for the victims. It occurred to him that of the people jamming the hospital many had only minor injuries or were not injured at all. Field triage and first aid would limit the number of people brought to the hospital, lessen the confusion, and perhaps hold in check the all-pervasive sense of urgency. This need to get things done quickly, he discovered, was a problem for others helping the victims. A first-aid station had been set up on the edge of the disaster area about an hour after the tornado had struck but was being overlooked because rescuers and ambulance drivers felt they must get the patient to the nearest hospital as fast as possible.

Our hypothetical Dr. Smith experienced problems which are likely to arise in any sudden disaster. He did not meet every problem which can occur and not every physician will experience all the problems he experienced. This little saga does, however, reflect conditions and problems which have a high probability of occurrence in a sudden peacetime disaster in an American community. These problems may be categorized in terms of several propositions. It should be emphasized that we are concerned with broad problems of human behavior and organization, many of them having to do with other agencies as well as the medical agencies, rather than with technical problems of treatment and procedure.

PROPOSITIONS CONCERNING MEDICAL SERVICES IN DISASTER

1. *Medical services, as well as other specialized and organized services, operate within a mass assault which the surrounding community launches on the disaster.*[1] At least 50 per cent or more of the primary rescue work in sudden disaster in American communities usually is done by amateur volunteers. When word of the disaster goes out, the lay public and agencies with no particular disaster function answer the distress call along with the regular emergency agencies, i.e., the police, fire department, Civil Defense, etc. Volunteers, agency personnel, and officials of all kinds, along with masses of supplies and equipment, converge quickly upon the stricken area.[2] A mixture of trained and untrained, organized and unorganized individuals pitch into the task of rescuing, caring for, and comforting

the victims. They move from one discrete task to another, forming spontaneous groups that dissolve and reform in different patterns.

The mass assault accomplishes a great deal. It results in congestion and confusion, but it also succeeds in concentrating large resources of manpower, supplies, and equipment where they are needed. From the organizational point of view, however, it is a situation which is uncontrolled. Persons anxious about loved ones, people trying to help, and sightseers converge on both disaster area and hospitals; hence, the hospitals become victims also of the mass assault. When the physician, the hospital, the first-aid team, and other medical and paramedical services are caught up in the mass assault, these conditions inevitably limit what they can do. Nevertheless, they are faced with the task, along with other agencies and authorities, of giving leadership, direction, and order to the situation if they are to perform their specialized services effectively.

2. *Disaster results in a disruption of the social and organizational structure within which medical and other services normally operate.* In disaster the social system of the community as a whole is disrupted and so also are the systems of participating institutions and agencies. Things do not occur in the same sequence and pattern as they normally do. The normal pace and timing are broken. Organized procedures, channels of communication, and supporting services are disrupted. Problems exist for which there are no standard precedents in normal times. The usual ways of doing things may not be possible. The system which is most dependent upon a highly refined, articulated organization may face the most drastic problems—either to restore its organization or to function effectively in its absence.

This, we believe, is a basic condition underlying many of the problems and apparent mistakes of disaster management. Medical services can be among those most hampered and influenced by the disruption of normal organization. Much of the functioning of modern medicine depends upon highly organized nonmedical services, such as public utilities. The hospital as a whole is organized as a series of interlocking and finely meshed services. The operating room with its professional team, with its carefully planned and placed arrangement of supplies and equipment, functions as a single highly skilled instrument. When part of such an integrated, interdependent system is disrupted, the system is likely to suffer, and perhaps the procedures dependent upon it.

We do not mean to imply that medical services cannot or do not function effectively under abnormal conditions. We do insist that disruption of normal systems is an underlying condition of emergency medical service in disaster which needs to be understood by all concerned in order that plans can be made to avoid or minimize disruption, that troubles which are basically organizational can be diagnosed and dealt with during disaster and not be confused with problems which are basically those of technic or therapy, and that medical and paramedical personnel will have some cognitive and emotional grasp of the kinds of situations into which disaster is likely to force them.

3. *Perfect control and organization of the rescue effort is probably impossible, but a strategic overview of needs and problems should be maintained, and controls should be exercised at strategic points.* The mass assault is too individualistic, too highly motivated, too laden with energy to yield entirely to discipline, plans or controls. However, if serious mistakes, such as leaving some devastated areas unattended while others swarm with rescue workers, or having some hospitals desperately overloaded with victims while others receive few, are to be avoided, some person or group has to secure and maintain a comprehensive picture of the situation. Leadership and controls can then be exercised at strategic points. Certain key decisions can be made in orderly sequence and with consideration of their interrelationships. Hospitals could then be

notified of how many victims to expect and be provided with medically relevant information in terms of types of injuries sustained. Channels to the hospitals could be kept clear of all traffic except that concerned with transporting injured. Rescue teams, heavy equipment, first-aid and triage stations could be established where they are needed and where they would not be missed by those needing them.

4. *Transportation is critical.* Lack of transportation could defeat the emergency medical care program. Victims must be brought to facilities where they can be treated; medical personnel and supplies must, in some cases, be sent to the victims where they are; supplies must be sent to personnel and facilities that need and can use them; and key officials must reach their posts. In a modern American community where these things may be separated by just a few blocks or miles, traffic congestion and obstructions can turn a 15-minute trip into a 60-minute journey. If public agencies could get the jump on convergence traffic and set up traffic control points far enough away from the stricken areas, hospitals, and other key points, congestion might be reduced to more manageable proportions. We say "might" because it has not yet been achieved in sudden disasters, although in one disaster police began setting up roadblocks within about 15 minutes after impact.[3]

A pertinent aspect of the transportation and traffic problem is that of patient distribution and "surgical lag." Hospitals close to the area, as a rule, receive the greatest number of injured and often become overloaded. As a result, many are given little more than first aid for some time, even though their need is serious. On the other hand, a victim may be removed 5 miles or more to a distant hospital, but wait only a very short time at the hospital before he is treated. Though the time required to get him to the more distant hospital is greater, the waiting time being less, the total time between removal from the disaster scene and care is shorter than it might have been had he been taken to the nearest hospital. Control of traffic and crowds so that patients can be taken quickly to more distant hospitals would encourage wider distribution of the victims among the hospitals in the community, and sometimes provide medical care sooner rather than later.

5. *Communication is a fundamental necessity.* Organization presupposes communication. Communication is necessary to bring order into the mass assault. It is the indispensable basis of advance warning; notification that disaster has occurred; mobilization of resources; reconnaissance to learn the extent, character, and location of the problems; continuing intelligence on conditions in the field and at the hospitals; maintenance of a strategic overview; and of coördination between different groups and centers. Communication channels are needed within each hospital, among hospitals, between hospitals and the disaster scene, between hospitals and other agencies, and between hospitals and the public.

Most of these should be 2-way channels so that information, for example, flows both from the hospital to the disaster area and from the area to the hospital. A person making important decisions must know whether his decisions are being carried out and what the results are if he is to keep on making intelligent decisions. Communication and appeals to the public should be coördinated with the agencies most directly involved before transmittal. Facilities and channels by themselves mean nothing if they are not properly and fully used.

6. *The problem of medical services, like other services, is at heart a logistical problem.* This does not mean that it is only a logistical problem. From the broad, organizational viewpoint it is essentially a management problem of getting the right services and the right victims together at the right place at the right time. Solution of a logistical problem requires 3 basic ingredients, resources, communication and transportation. You must have the proper supplies, equipment and skilled personnel; you must know where the

different resources are needed; and you must get the resources to the places where they are needed, or the people who need them to the resources. With respect to medical and auxiliary supplies in sudden, peacetime disasters in American communities, supplies seem to be adequate. Supplies converge on the disaster scene, hospitals, and other places in waves, often unrequested, like "manna from heaven."[4] In general, oversupply is more of a problem in disaster than undersupply.

Undersupplies are more likely to occur in relation to some specialized need, such as a particular drug or piece of equipment. These can usually be located fairly quickly in the nearby community or communities. A particularly crippling supply failure would, of course, be power or water. Auxiliary sources should be provided in advance. In requesting supplies, it is a good thing to try to request them from a known source and in the amount needed, or at least through some agency such as the police or Red Cross. If a general appeal is made, a troublesome wave of oversupply is likely to ensue.*

We are reminded here of a village isolated during the Holland flood of 1953. The radio operator was asked to request a surgeon and some cattle fodder. The message was relayed and repeated throughout Holland. The next day over miles of angry water and flooded land, 6 surgeons and 10 tons of cattle fodder arrived.[5]

Supplies, transportation, and communication are not enough by themselves. They are tools which require planning and organization for use by skilled individuals who are capable of making decisions under conditions of stress.

7. *Plans and preparations will make a significant difference in the performance of medical services.* When the vast pluralism of efforts, the lack of communication and coördination, the continued development of the unexpected, and the plethora of needs are envisioned, it seems almost hopeless to try to introduce organization and control into the rescue effort. Planning for disaster seems an awesome task. It is not necessary to be overwhelmed, however. The problem becomes intellectually manageable when key functions are identified.

We have discussed some of the factors which should be considered in the making of plans. It is not the intent to define the form and details of such plans. This task must be the responsibility of medical professionals and community officials. However, we do wish to emphasize 3 general points which have forced their attention upon us through our study of disaster.

Plans are necessary. We are referring to the need of organizational planning which, for example, will make it possible for all patients to be admitted in an orderly process through one entrance of the hospital, or will set up emergency points of entrance if this is required, so that patients do not come crowding, unsorted and undirected, into other parts of the hospital. Even if one entrance room is deemed to be adequate, the possibility should be envisaged that patients may enter through other points, whether they are supposed to or not. The plan could make provision for quickly assigning additional triage officers to such points.

The previous discussion should make it clear that no matter how well he knows and performs his job the medical person is affected by many other things over which he has little or no control. Planning helps to free and protect the medical personnel from intervening conditions. The unit of effective management for medical services is not limited to patients, hospitals, and other medical facilities.

Plans for emergency medical care should be integrated with plans for other disaster services. They are a responsibility of the entire organized community, not just of the medical organizations. We have indicated how traffic congestion can affect medical care. It would be a terrific waste of resources for a doctor to step out and direct traffic, and he probably would not be very good at it anyway. This is a job for other agencies, but the extent to which they do it well affects the extent to which the doctor can do his job well. Medical and other agencies need to plan together. We would not expect the police to make a plan for distributing patients among hospitals, but if police are manning the traffic check points, they must know to which hospital to direct volunteer ambulance drivers.

---

* This statement is valid only in reference to peacetime disasters. Extensive destruction in wartime disaster would in all probability result in serious problems of undersupply.

A good plan is a practiced plan. To work, a plan has to be known and understood by all those who have a part in it. If they have practiced the plan, they are much more likely to follow the plan under the stress of a real emergency. Disaster research continually reveals plans which existed only on paper. These kinds of plans are not of much help.

Factors Influencing Individual Performance

Even with good plans, competent people, intelligent attention to transport, supply and communications there is still likely to be some irreducible minimum of confusion. A major disaster, particularly a sudden violent one, is irrevocably a situation of trauma and stress. With the best of all possible plans the individual is bound to work under trying circumstances.

When mistakes are made by people who should know better, when things seem to be hopelessly out of control, the almost ubiquitous answer is that the people involved "panicked," or "lost their heads," or "broke down emotionally." This facile explanation is in the first place usually not accurate, and in the second place useless even when accurate. It does not explain very much. Disaster research has shown that in American community disasters few people "panic" in any strict sense of the word; only a minority of the general population "lose their heads" or "break down." There is a significant minority of people who are sufficiently impaired psychologically to warrant help and direction. These individuals require reassurance, reorientation, and information. This is a different problem, however, outside the scope of this paper.

Disaster research has shown that people with responsibility, training, and experience—people who have a helping role to fulfill or a responsibility to live up to—are more likely to behave adaptively and efficiently than others. Medical personnel are preëminent examples of persons who have clear, important roles and who have been trained to fulfill them. Our research has not turned up a single case of a physician who "panicked," "lost his head" or anything of this dramatic nature.

However, it is true that many people, and possibly a substantial majority, behave for part of the time at less than their peak efficiency with regard to judgment and performance. This is true whether they are somewhat dazed or whether they are hyperactive and furiously energetic. Briefly, we would like to suggest 7 factors which we think help to account for the difficulties and problems of normal disaster behavior.

1. *There is a compelling urgency to act and a tendency to think that every act must be performed as rapidly as possible.* Time, as we have indicated, is objectively a serious part of the problem of medical services. For a while the load is much greater than normal. Concomitant with the objective dimension of time there is often a subjective dimension characterized by an inner compulsion to act as rapidly as possible. This appears to be independent of any objective calculation of how much work there is to be done and how long it will take to do it. Response to this inner compulsion may lead to action which is more rapid than is necessary even in the emergency situation.

2. *There is intense concentration upon the task immediately at hand and a narrowing of the sphere of awareness.* Many people in disaster, both victims and their helpers, seem to operate within a field of narrowed perception or limited awareness. They tend to become intensely involved in the immediate task to the exclusion of all else.

3. *Under stress and in confused surroundings*

with inadequate information people tend to fall back upon the familiar response. People must restore some sense of order and find some sort of meaningful behavior. When the situation is unexpected, confused and stressful, they are likely to try to use familiar responses and habits and to persist in this behavior even when it is not effective or actually is inappropriate. (On the other hand, familiar responses which are appropriate may be modified, under the pressure of stress, and through modification become inappropriate.)

4. *Under stress the ability to discriminate patterns and relationships and to anticipate future circumstances may be temporarily lessened.* There is evidence that these more complex functions or behaviors are disrupted by stress.[6] With the variables just described, this may explain why it is difficult to "look ahead" and to think about coördination, interrelationships, and such comparatively complex matters when under the great pressure of emergency.

5. *Medical personnel, like others with special jobs, are sometimes subject to serious conflict of roles.* One dilemma a doctor may face is whether to give treatment to people at hand who need his help or whether to report to the hospital or some other place to carry out an assigned function. The matter of ethics involved is one which we are not competent to discuss, but it must be pointed out that no plan will work unless those supposed to enact particular roles do so. Another conflict of roles plagues the person who has loved ones in the stricken area. It is difficult for any man, however great his responsibilities, to go about his duties and not try to seek and help his loved ones. Though he goes about his job as assigned, the person who suffers these conflicts may find his efficiency impaired, and he may pay an additional physiologic or psychologic price.

6. *The individual may suffer a burden of guilt because he feels he did not do enough.* In a really major disaster many persons may be placed in a position where they simply cannot help all those whom they see needing help. Some people may even appeal for help which cannot be given. Even if the individual consciously acknowledges the fact that he did or is doing all he can, he may unconsciously harbor guilt. These feelings may be debilitating or disruptive.

7. *The individual works often in a disrupted situation which does not provide the supports and organization he is used to.* This point we have discussed earlier. We would like to suggest here that disruption of the systems within which one is accustomed to work may be a contributing factor in reducing individual effectiveness because of psychologic as well as objective reasons.

What, we may ask ourselves finally, can be done about these variables which affect individual performance? There is no pat answer. It reduces, we believe, to answers one would expect: to training, experience, advance orientation to the rigors of disaster situations within which one must expect to work; to a so-called "emotional inoculation" through training, experience, and advance orientation; to planning and preparation; and to the quick and effective introduction into the post-impact situation of the organization, communication, control, and leadership necessary to protect the medical personnel and facilities from the problems of the mass assault, thus minimizing the pressures as much as possible.

BIBLIOGRAPHY

1. Rosow, I.: Authority in National Disaster. Washington, D. C.: National Academy of Sciences-National Research Council, Committee on Disaster Studies, 1956, p. 89.
2. Fritz, C. E., and Mathewson, J. B.: Convergence in Disaster: A Problem of Social Control. Ibid., 1956.
3. Fritz, C. E., and Mathewson, J. B.: Ibid., p. 283.
4. Fritz, C. E., and Mathewson, J. B.: Ibid., pp. 90–2.
5. Instituut voor Sociaal Onderzoek van het Nederlandse Volk: Studies in Holland Flood Disaster 1953. Amsterdam: The Instituut, 1955, **1**, 57. (Washington, D. C.: National Academy of Sciences-National Research Council, Committee on Disaster Studies, 1955.)
6. Rioch, D.: Certain biological and social aspects of acute situational stress, unpublished paper read at the Symposium on Human Behavior in Extreme Situations at Vassar College, February 12–13, 1955.

PRACTITIONER AND SYPHILOLOGIST DISCUSS A COMMON PROBLEM

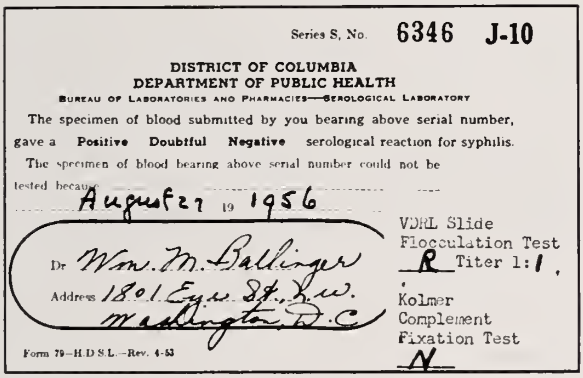
S. ROSS TAGGART, M.D.

Acting Chief, Preventable and Chronic Diseases Division, District of Columbia Department of Public Health

WILLIAM M. BALLINGER, M.D., F.A.C.P.

Associate Professor of Gastroenterology, Georgetown University School of Medicine

PRACTITIONER: Recently published articles indicate a very material decrease in the incidence of syphilis, yet I have continued taking routine serologic tests for syphilis on my patients, since I know that syphilis, undiscovered and untreated, will, in most instances, lead to general physical disability, insanity, heart disease, and death. Do you believe serologic tests for syphilis should be made routinely on all patients coming under my care? If this is done, a problem often presents itself: A few reports come back to me on patients who have a very low titer, such as the one shown here:



Series S, No. **6346 J-10**

DISTRICT OF COLUMBIA
DEPARTMENT OF PUBLIC HEALTH
BUREAU OF LABORATORIES AND PHARMACIES—SEROLOGICAL LABORATORY

The specimen of blood submitted by you bearing above serial number, gave a **Positive** **Doubtful** **Negative** serological reaction for syphilis.

The specimen of blood bearing above serial number could not be tested because

August 27 19 1956

Dr Wm. M. Ballinger
Address 1801 Eye St., N.W.
Washington, D.C.

VDRL Slide Flocculation Test
R Titer 1:1

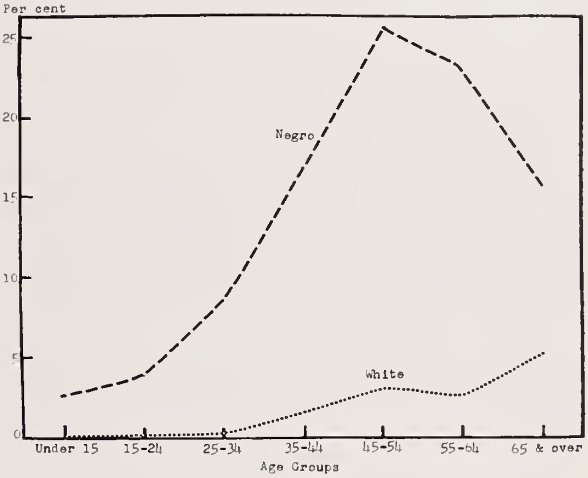
Kolmer Complement Fixation Test
N

Form 79—H.D.S.L.—Rev. 4-53

SYPHILOLOGIST: Yes! Routine serologic tests for syphilis must be continued for some time yet or a tragic progression of the disease will ensue in some patients. Here (chart 1) are the results of serologic testing done on 16,000 individuals here in Washington in 1954. You can see that one cannot yet eliminate routine testing; the risk in terms of insanity, heart disease, and other crippling is too great.

CHART 1

Per cent of Persons Tested Having Positive Blood Tests by Age and Race: District of Columbia Blood Testing Survey



PRACTITIONER: We have been told that a serologic test should be repeated before establishing a diagnosis of syphilis to rule out labeling and other laboratory errors. Usually the subsequent tests on these patients are also positive in low titers. Occasionally (and this is what confuses me most) I get back a negative report either from the same laboratory or, in certain instances, from another laboratory to which I have sent a duplicate sample for confirmation.

In most of these patients, there is nothing in the history suggesting primary or secondary lesions to aid in the evaluation of the patient. I have yet to have one of these patients admit to any premarital or extramarital exposure. How do I proceed from this point?

SYPHILOLOGIST: Syphilis is an all-or-nothing proposition. An individual is either infected with syphilis or is not infected with syphilis. The serologic test for syphilis is a very valuable but not a perfect tool for establishing a diagnosis of syphilitic infection. Remember, this test is a nonspecific test, and, while in general it reacts in a manner comparable to an antibody, in other of its characteristics it is not entirely similar to an antibody. The reactive substance in the blood serum is termed reagin. It appears to be universally present in every individual. In some few persons this reagin is always high enough for a serologic test for syphilis to be positive, even though no stimulating or infectious cause can be determined. In others this reagin formation is only stimulated by numerous viruses, bacteria, and, of course, specifically by the Treponema of syphilis, yaws and pinta and by nonbacterial diseases, such as the collagen diseases. The acute diseases, such as viral pneumonia, mononucleosis, and the like, usually produce only small or moderate rises in reagin, and these are temporary. These types of reactive states usually persist for only a few days or a few weeks. However, some of the more chronic bacterial or protozoal infections, such as leprosy and malaria, or the collagen diseases, produce a more persistent type of reaction. These humeral rises in reagin not caused by a Treponemal disease are known as "biologic false positive reactions." As a rule, patients infected with the Treponemal diseases, although occasionally reverting to seronegativity spontaneously, generally show persistent seropositivity throughout their lifetime unless treated early in their disease. Those treated after the infection has been present for 3 or 4 years seldom obtain seronegativity even though cured of their infection. Unfortunately, an occasional patient with a serious syphilitic infection and crippling, such as cardiovascular or central nervous system disease, does not have a positive serologic reaction for syphilis. That the strength or titer of a serologic reaction is not an indication of the severity of the infection but rather an indication of the body's response to infection must be stressed. A patient may have a severe crippling disease with a very low serologic titer and, as said above, have a negative serologic reaction. Tests of a low titer cannot be discounted in the evaluation of a patient.

PRACTITIONER: Having reached this point, it seems then that I must establish whether my patient has a biologic false reaction or has syphilis.

SYPHILOLOGIST: In view of weakly reactive and conflicting laboratory reports, one is often tempted, I am sure, to flip a coin to decide the matter. It is my feeling that one should proceed to resolve the patient's problem in one of the following ways: (1) Apply treatment immediately with the idea of insuring the patient against any progression and crippling by syphilis, (2) utilize a more specific test, or (3) observe the serologic reaction for a few months.

The insurance type of treatment. Treatment utilizing 6 million units of a repository type of procaine penicillin over a 2-week period, or 1 injection of 2.4 million units of benzathine penicillin (Bicillin) at a single injection, has been shown to be highly satisfactory. The patient is spared the expense of further investigation in order to establish a specific diagnosis and, more pertinent, he and his family are spared the possible psychic trauma of having a diagnosis of syphilis established. In the event that serologic testing of marital partners and children can be accomplished, this course, as you realize, has considerable merit to recommend it in patient handling. This type of insurance treatment should always be applied to an individual unless it is assured he will follow through to a definitive diagnosis if that course is decided upon.

The specific test. The only test currently available that is more specific than the serologic test for syphilis is the *Treponema pallidum* immobilization test (TPI). This test is based on the immobilization of living spirochetes by what is apparently a true syphilitic antibody within the serum. This test is not generally needed except in cases in which the diagnosis of syphilis is in doubt, and it is especially important that its presence or absence be established. This test is now performed by the following private laboratories:

University Hospital, Department of Dermatology and Syphilology, University of Michigan, Ann Arbor. Attention: A. H. Wheeler, M.D., Assistant Professor of Bacteriology. Charge: $25.00 per specimen.

The Dickman Laboratories, 1415 West Erie Avenue, Philadelphia 40, Pa. Attention: Albert Dickman, M.D., Director. Charge: $30.00 per specimen.

Physicians intending to send blood samples to these laboratories should write them for instructions in reference to obtaining and shipping the sample.

Tests on carefully selected patients may be obtained without charge by sending blood samples to the Serology Division, Bureau of Laboratories and Pharmacies, D. C. Department of Public Health. Instructions for obtaining these samples and for supplying necessary information for the patient can be obtained from the serologist. The Department does not do the TPI test but forwards the sample to the U. S. Public Health Service, Communicable Disease Center, Chamblee, Georgia.

Results of tests are not returned to the D. C. Department of Public Health Laboratory for some 2 or 3 weeks after sending the sample from Washington. Results from the private laboratories are usually received within a few days.

Observation. The acute infectious diseases usually produce a rise in reagin to a reactive level for only a few days or a few weeks. If the patient is reliable and can be continued under observation for a matter of 3 or 4 months, a serologic test can be taken at monthly intervals. If the test reverts and remains seronegative, a diagnosis of biologic false reaction can be made and the patient will not require antisyphilitic treatment. If, however, the serologic test remains reactive for more than 4 months, it is surely the wisest course to give penicillin treatment unless a Treponema immobilization test has been done and is negative.

PRACTITIONER: As yet, you haven't said anything about whether I should do a spinal tap and the serologic reactions of the spinal fluid tested in these doubtful cases. In other words, when is a spinal fluid test for syphilis indicated?

SYPHILOLOGIST: In case you choose to select the TPI test method of patient handling and the TPI is negative, a spinal fluid test need not be done.

If the observation course is selected, a spinal fluid test may be diagnostic. If positive, of course, the case is resolved. Therefore, in the instance that observation is selected, a spinal tap should be done as early in the diagnostic study as is possible.

If insurance treatment is given, a spinal fluid examination need not be done initially. Following treatment, if the serologic tests done during a reasonable period of follow-up (6 months to 1 year) are negative, the spinal fluid test may be omitted. However, if the serologic test remains positive for 1 year, the spinal fluid should be examined.

PRACTITIONER: Suppose I have an uncertain case with a low-titered reaction, should I follow the insurance plan and treat with penicillin? What should I expect as I follow this patient? When should repeat serologic testing be done, and what will it show if (1) he actually has syphilis and (2) if he does not have syphilis?

SYPHILOLOGIST: When chronic reagin-stimulating disease can be ruled out, a diagnosis of syphilis is supported in those patients who have reactive STS for 3 to 4 months. If the tests are negative, they are of no diagnostic import. This finding may mean (1) that if syphilis were present seronegativity has been attained following treatment or (2) that syphilis was not present and the stimulant to reagin formation is no longer active in the patient. A year's observation with a STS at a 6-month interval is adequate for these patients. If the STS remains positive after a year's observation, a spinal tap and spinal fluid test should be done as a part of the follow-up study. If the STS is found negative on both tests, a spinal fluid examination need not be done.

PRACTITIONER: What considerations apply in reference to conflicting reports, that is, positive or reactive tests in one laboratory and negative in another? By the way, how did this "reactive" term creep into the serologic report?

SYPHILOLOGIST: The serologists, realizing that the serologic test for syphilis really was not diagnostically certain for anything, but merely measured an amount of nonspecific reagin in the serum, have adopted the terms "reactive (R)" and "weakly reactive (WR)" as being a more scientifically correct way of reporting than the terms "positive" and "doubtful," which terms were used previously. A serologic test for syphilis, either complement fixation or flocculation test, measures only an amount of reagin in the serum on the day it was tested. This amount may vary from day to day and is one reason for conflicting reports. A second reason for conflicting reports is that the various antigens or technics used within different laboratories may vary their testing sensitivity, so that one laboratory will consistently be determining a lesser amount of reagin in its serotesting than will another laboratory. Also, factors, such as the temperature at which the test is run and humidity, influence the reading of the test. The D. C. Department of Public Health makes every effort to maintain its serologic test at a standardized level of reactivity and may be used as a reference laboratory when desired. A standard level of sensitivity of antigen emulsions is maintained through the daily use of control serum furnished by the U. S. Public Health Service Venereal Disease Research Laboratory. Also, the Department's serologic laboratory enters a national evaluation on a periodic basis, usually yearly. Samples of blood sera of known syphilitic and nonsyphilitic donors are sent by the U. S. Public Health Service Venereal Disease Research Laboratory to most state and some well-known laboratories, such as Kahn, Kline, Mazzini, and others. The reactivity of the tests done in these and our laboratories is compared. In order for the laboratory to be considered acceptable, a standard of level of reactivity or titer which has been found by experience to be the most useful diagnostically must be met. The results of the sensitivity and specificity measured in the annual evaluation of the Department of Public Health Laboratory's serologic test have been satisfactory now for over 20 years. Also, as a check the Department of Public Health has syphilitic patients under observation in its clinics whose titers are stabilized and thus is able to ascertain on a day-to-day basis the reactive level of the test. This type of observation is particularly reassuring, since if any marked change in test results should occur, it would become evident immediately.

PRACTITIONER: A further question: What about reinfection syphilis? Does it have any distinguishing serologic reaction? For example, I have a patient who has a history of having had syphilis and has had treatment. He now comes in and I find a positive serology. How may I tell whether this is (1) a fixed positive reaction, (2) syphilis that has been insufficiently treated, or (3) a reinfection?

SYPHILOLOGIST: This is a difficult question to answer briefly. Usually, a reinfection causes a rise in serologic titer. If a history of a chancre or a rash is obtained and there is a rise in titer over previously observed tests, a diagnosis of reinfection should be considered. In the event no history or physical evidence of primary or secondary lesions is adduced but a rise in titer occurs, it cannot be definitely established whether this represents treatment failure or reinfection. Asymptomatic reinfection, we know, does occur. That there were only 38 cases of primary and secondary syphilis reported in Washington last year (1955) shows that the chance of infectious exposure is not great, especially if all the patient's sexual partners have been examined and treated, definitively or prophylactically. In any event, retreatment is indicated for any patient who shows a sustained rise in serologic titer in tests taken over a period of 3 to 4 months, whether due to reinfection or treatment failure. Remember, transient rises in titer may be induced by acute infections, calling for a period of observation.

It should be well known by now that, when syphilis has been present for a number of years, a fixed positive reaction—serofastness is another term—is present in most patients. The fortuitous outcome of seronegativity is attained in only about 15 per cent of patients who have been infected with syphilis for 4 or more years.

We have adopted a rule-of-thumb approach in reference to whether additional treatment is indicated in the serofast or fixed positive reactive patients. If, 1 year after the initial treatment, the serologic titer remains at the same level as it was initially, retreatment, for 1 time only, with 9 million units of penicillin is given. If the titer has fallen to any level below what it was initially, retreatment is not indicated. Of course, a careful physical and neurologic examination should be given and it should be known that the spinal fluid findings are negative in these serofast cases. In most instances there is no indication for giving more than these 2 courses of treatment.

PRACTITIONER: Are we masking syphilis by the current use of antibiotics, more especially penicillin? In other words, is it possible that we are developing a crop of undertreated syphilitics who are temporarily serologically negative but who actually have the infection? Also, do the mycin drugs have any therapeutic effect in syphilis?

SYPHILOLOGIST: The answer to your first question is "No." During the incubation period, it takes only a very little antibiotic to cure syphilis. Also, with the level of control we have reached, the probabilities of infection are not very great. If the amount of antibiotic given has not been sufficient for cure, the serologic test rapidly becomes and remains positive.

Notice that I said antibiotic instead of penicillin, because the broad-spectrum antibiotics, including tetracycline, chlorotetracycline, and chloromycetin, have been shown to be effective treatment agents. Other broad-spectrum antibiotics are undoubtedly effective but have not as yet been evaluated. For the patient allergic to penicillin, the 3 antibiotics above mentioned, in dosages of 60 mg. per Kg. per day for 8 days, will give as good results as penicillin in the treatment of syphilis.

NOTE: The reader is referred to a more extensive discourse on this subject: FIUMARA, N. J., APPEL, B., HILL, W., AND MESCON, H.: Syphilis and its management—a present-day problem. New England J. Med., 1956, **254,** 1127 and 1173.

KARTAGENER'S SYNDROME

Review of the Literature and Report of a Case

COLONEL RAYMOND MARET, M.C., U.S.A.*
Chief, Professional Services Division, Headquarters First Army Medical Section, Governors Island, New York
CAPTAIN DAVID C. MILLER, M.C., U.S.A.
United States Army Hospital, Fort Hood, Texas

MOST PHYSICIANS, in a lifetime of practice, can count the number of cases seen of dextrocardia, with or without situs inversus, on the fingers of one hand. However, an awareness of the disabilities accompanying this congenital defect can materially assist in the management of the patient.

In 1904 Siewert[1] first described a 21-year-old man with situs inversus and bronchiectasis, symptomatic since early infancy. In 1933 Kartagener,[2] after collecting 11 cases in the literature, added sinusitis to the organ transposition and pulmonary features, establishing the triad which bears his name today. Eighty cases reviewed by one group[3] in 1950, 40 by authors[4] in 1951, and smaller series including single case reports[5] all seem to indicate clinical acceptance of the more than coincidental features of this condition. Many of the cases of bronchiectasis and sinusitis seem to be associated with dextrocardia alone without situs inversus, thus substantiating the import of the cardiac position in the syndrome. Atelectasis due to bronchial compression is also a prominent feature.

The ages of reported cases range from 3 days[5] to 63 years,[4] with symptoms present in 90 per cent before the age of 14. Dickey[6] reported 5 cases in children ranging from 6 weeks through 14 years of age in whom lobectomy was accomplished with amelioration of symptoms in 3 cases; 1 patient died before operation could be performed. Early diagnosis and bronchography, followed by surgery, seem to offer the best outlook to prevent chronic invalidism as well as a fatal outcome in some cases.

The determination in one study that as many as 21 per cent of patients with dextrocardia have bronchiectasis,[7] compared with the incidence of bronchiectasis of only 0.3 per cent of 240,000 hospital admissions, appears to be significant. Another survey of 85 cases of dextrocardia demonstrated 16.5 per cent with bronchiectasis, contrasted with less than 0.5 per cent of all the patients at the Mayo Clinic so diagnosed.[8]

That even the dextrocardia is often unrecognized for many years pervades the case reports. Numerous bouts of acute sinusitis and pneumonia necessitating physical examination and/or roentgen studies are included in the past histories of many of the individuals studied. The case described below certainly bears out these contentions in that the patient stated he had many auscultatory examinations of his heart and lungs over a period of years. In addition, chest roentgenograms, both prior to and since entering the military service, were not interpreted as abnormal. The radiologists understandably merely reversed the film in the viewbox, thus giving normal anatomic positions to thoracic structures.

REPORT OF CASE

A 21-year-old white man was admitted to U. S. Army Hospital, Fort Hood, Texas on March 2, 1956 because of a chronic cough with production of increased amounts of purulent sputum and pain in both sides of his chest on respiration. These complaints had increased in severity since returning to the United States from Korea on December 10, 1955. The pain was mainly in the right lateral chest wall with some moderate involvement of the left lateral chest wall and was pleuritic in nature. The patient believed that he had lost about 10 pounds in weight in the past year.

---

* Formerly Chief of Medical Service, U. S. Army Hospital, Fort Hood, Texas.

The patient stated that he had always had a cough, which worsened as he grew older, with chronic nasal congestion and frequent colds. At the age of 12 he took a series of desensitizing injections twice weekly for about 6 months from a private physician. He had used considerable amounts of nasal sprays and drops. He had been treated frequently with penicillin and streptomycin during his Army service for severe colds and cough. The cough was most severe after awakening in the morning and late in the evening. At 6 weeks of age the patient had a severe attack of bronchitis which nearly terminated fatally. He had pneumonia at 6 months of age and again at 1 year of age. He had always suffered from a severe chronic rhinitis. Childhood diseases consisted of chickenpox, scarlet fever, and possibly a mild poliomyelitis at the age of 7. Adenoids were removed at the age of 10. He had no other serious illnesses or operations.

This man entered the Army on March 24, 1954. He was sent to Korea, arriving there August 31, 1954 and returning to the United States, November 23, 1955. He smoked approximately 1 package of cigarettes daily.

The father, aged 46, the mother, aged 42, and a sister, aged 18 are alive and well. One aunt died of tuberculosis at 21, and a grandfather had asthma. There is no other relevant family history.

The patient was a tall, blond, well-developed and well-nourished white man who talked with a pronounced nasal intonation. He was mentally alert. The head and neck appeared normal. A mucopurulent nasal exudate was present with swollen, injected mucous membranes. The tonsils had been removed. The pharynx showed moderate injection. The teeth were in fair repair. The chest was symmetrical with good expansion. There were inspiratory and expiratory wheezes present over both lung fields, and coarse rales and rhonchi were heard. There was no dullness to percussion. Vital capacity was 111 per cent. The point of maximum impulse over the precordium was to the right of the sternum in the fifth intercostal space, approximately 2 cm. from the midsternal line. The heart sounds were muffled over the left precordium. They were louder to the right of the sternum in the fifth intercostal space. No murmurs were heard. The blood pressure was 125/74. The heart rate was 84 per minute. Liver, spleen and kidneys were not palpable. There were no herniae present. The back, rectum, and prostate were normal. Extremities showed no signs of cyanosis or clubbing of the fingers. Neurologic examination was negative. The skin was clear. There was no lymphadenopathy noted.

Urinalysis was normal. The white blood cell count was 11,800, with 76 per cent neutrophils, 23 per cent lymphocytes and 1 per cent eosinophils. The hemoglobin was 17 grams. The sedimentation rate was 12 mm. per hour. The hematocrit was 52 per cent. Serologic examination was negative. Sputum cultures revealed alpha, beta, and gamma hemolytic streptococcus, hemolytic *Staphylococcus aureus*, coagulase positive, and nonhemolytic *Staphylococcus albus*. Sensitivity determinations showed the organisms sensitive to erythromycin, chloromycetin and terramycin, slightly sensitive to

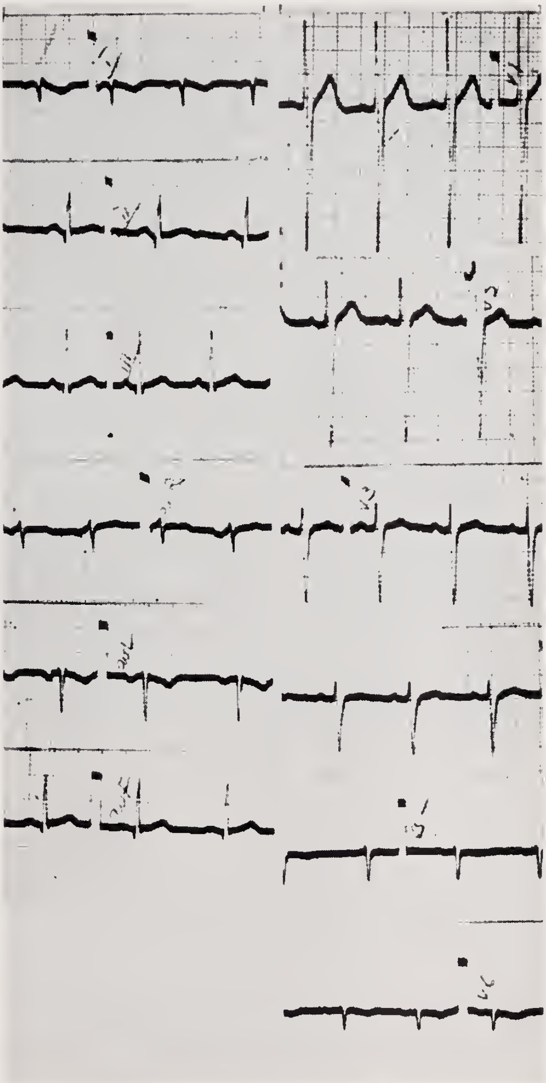


FIG. 1. Typical dextrocardia.

aureomycin and streptomycin, and resistant to penicillin.

An electrocardiogram (figure 1) showed the typical configuration of dextrocardia. X-ray films of the chest (figure 2, A and B) showed dextrocardia with an area of suspicious atelectasis at the left hilus. The stomach bubble was present on the right. A barium swallow (figure 3) confirmed the dextroposition of the stomach. There was no evidence of hiatal hernia. Bronchograms (figure 4) revealed a short isolated segment of bronchiectasis in the left middle lobe. Roentgenograms of the sinuses showed cloudiness of the maxillary antra with apparent absence of the frontal and sphenoid sinuses.

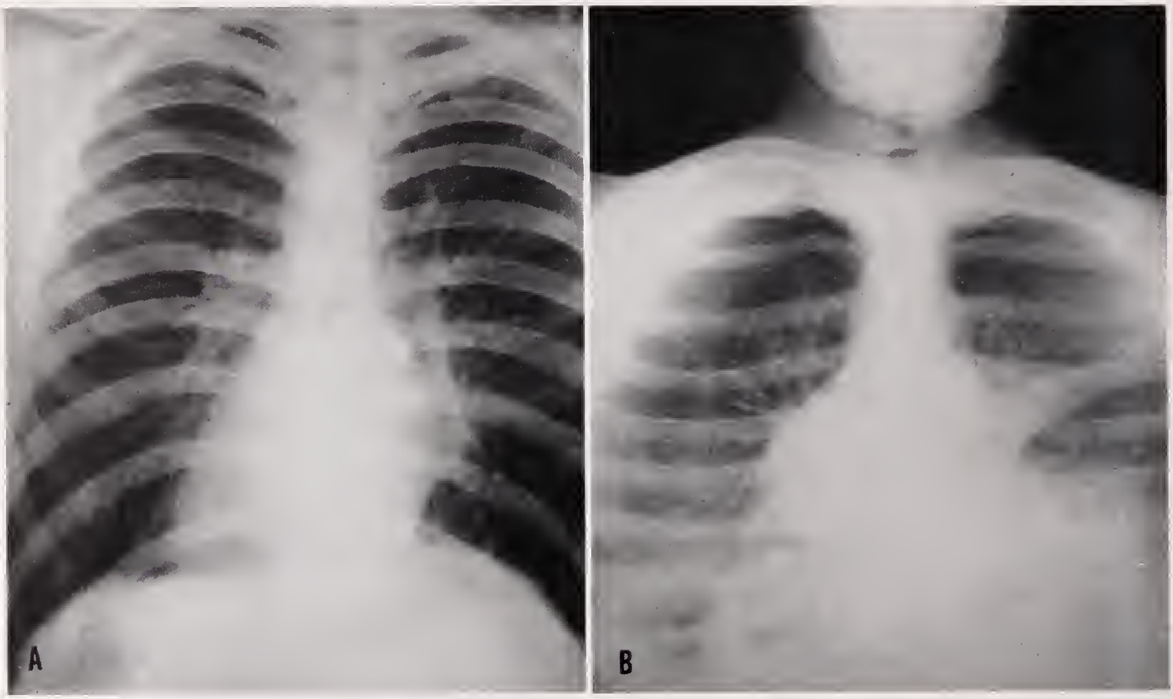


Fig. 2. (A) Dextrocardia with stomach bubble on right. (B) Probable atelectasis at left hilus.

Upon admission the patient was not acutely ill, but he did run a low-grade temperature. Dextrocardia was noted on the initial physical examination, and with the history and other pertinent findings, the diagnosis of Kartagener's syndrome was made. Therapy was instituted with chloromycetin, 250 mg. 4 times daily, to combat the pulmonary infection. Since further definitive treatment was considered necessary for the atelectatic bronchiectatic middle lobe, the patient was transferred to the Thoracic Surgery Service at Brooke Army Hospital for resection of the involved lobe.

Discussion

The etiology of Kartagener's syndrome remains obscure to this date. There is evidence for both the congenital and the acquired etiology of the bronchiectasis. The high incidence of bronchiectasis found in dextrocardia and situs inversus (16.5 and 21.7 per cent) compared to findings in general hospital admissions remains significant. While heredity must usually be the primary factor, or at least a predisposing cause, it is conceivable that pulmonary collapse in a lobe may occur after birth, followed by bronchiectasis. This is usually of the tubular type, instead of the cystic variety generally regarded as congenital.[9]

Conway[9] believes that the great majority of bronchiectasis is acquired and states: "If it is congenital it should be possible occasionally to demonstrate it in a stillborn foetus or in a neonate in whom atelectasis and infection have not occurred."

Dickey[6] believes the sequence of events in the development of Kartagener's syndrome is (1) congenital anomaly of the cardiovascular system (dextrocardia, sometimes with other anomalies), (2) atelectasis, (3) bronchiectasis, and (4) sinusitis.

The lesions present in the nose and sinuses of patients with this malady are varied. There may be mild to severe sinusitis and hypoplasia or agenesis of the sinuses. Kartagener and Ulrich,[10] in a study of a group of 86 patients with bronchiectasis, observed that the frontal sinuses were frequently very small or absent. The simultaneous occurrence of bronchiectasis and sinusitis was believed by these authors to indicate a coördinated constitutional factor in the sinuses and bronchial tree that is responsible for localization of infections there.

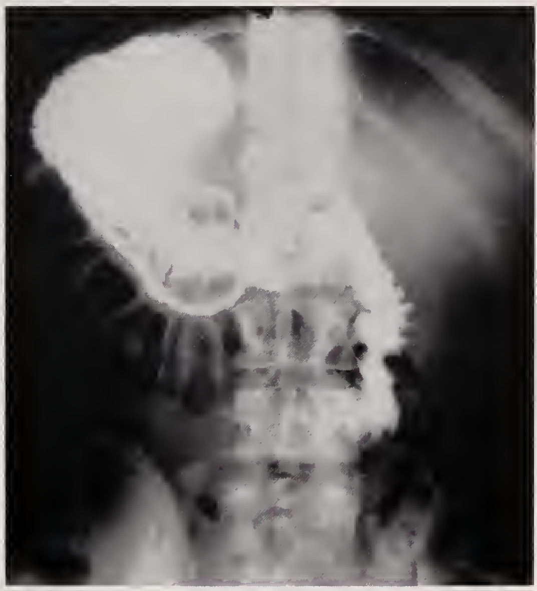


FIG. 3. Dextroposition of stomach.

In the case presented it should be noted that the only area of bronchiectasis found by bronchogram studies was a tubular area in the atelectatic left middle lobe. The remaining lobes were normal.

The patient had a history of severe respiratory infections, and with pneumonia twice in early life.

The treatment of this disease consists of resection of the affected pulmonary tissue. The age of the patient is not a problem; the earlier the diagnosis and treatment, the better will be the ultimate prognosis.

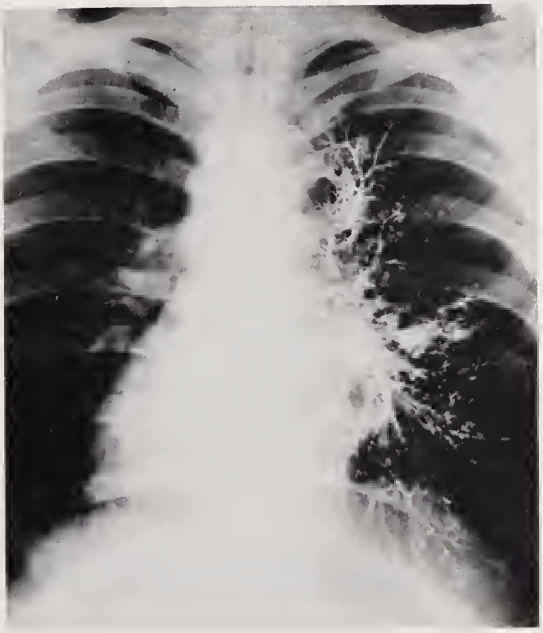


FIG. 4. Bronchiectasis in left middle lobe.

SUMMARY

A case exhibiting the typical clinical findings of Kartagener's syndrome is reported.

A review of current literature was accomplished with no clear-cut etiologic conclusions reached, except for the syndrome to be present in a substantial number of patients with dextrocardia.

Awareness of this interesting disease is necessary to the practicing physician because definitive therapy can be offered the patient which will greatly reduce his symptoms and later complications. The families of patients with Kartagener's syndrome should be screened for similar abnormalities.

ADDENDUM: Since this paper was submitted, the patient underwent surgery with removal of the left middle lobe. He was subsequently returned to duty in July 1956. The pathologist's report of the resected lobe states: There is marked and diffuse interstitial fibrosis and chronic inflammation without evidence of caseous necrosis. Many vessels show sclerosis, and the alveoli are lined in some areas with a single layer of cells apparently representing a reaction to injury and not neoplasia. The bronchi show some dilatation and desquamation of the epithelium with fibrosis and chronic inflammation consistent with bronchiectasis.

BIBLIOGRAPHY

1. Siewert, A. K.: Ueber einen Fall von Bronchiectasie bei einem Patientem mit Situs inversus viscerum. Berl. klin. Wchnschr., 1904, **41**, 139.
2. Kartagener, M.: Zur Pathogenese der Bronchiektasien; Bronchiektasien bei Situs viscerum inversus. Beitr. Klin. Tuberk., 1933, **83**, 489.
3. Bergstrom, W. H., Cook, C. D., Scannell, J. G., and Berenberg, W.: Situs inversus, bronchiectasis and sinusitis. Pediatrics, 1950, **6**, 573.
4. Zuckerman, H. S., and Wurtzebach, L. R.: Kartagener's triad; review of literature and report of case. Dis. Chest, 1951, **19**, 92.
5. Richards, W. F.: Situs inversus viscerum, absent frontal sinuses with ethmoid and maxillary infection, and bronchiectasis; Kartagener's triad; report of case. Tubercle, 1944, **25**, 27.
6. Dickey, L. B.: Kartagener's syndrome in children. Dis. Chest, 1953, **23**, 657.
7. Adams, R., and Churchill, E. D.: Situs inversus, sinusitis, bronchiectasis; report of 5 cases, including frequency statistics. J. Thoracic Surg., 1937, **7**, 206.
8. Olsen, A. M.: Bronchiectasis and dextrocardia; observations on etiology of bronchiectasis. Am. Rev. Tuberc., 1943, **47**, 435.
9. Conway, D. J.: Congenital factor in bronchiectasis. Arch. Dis. Childhood, 1951, **26**, 253.
10. Kartagener, M., and Ulrich, K.: Zur Pathogenese der Bronchiektasien; Bronchiektasien und Veränderungen der Nasennebenhöhlen. Beitr. Klin. Tuberk., 1935, **86**, 349.

A DIAGNOSTIC CASE PROBLEM

(*Continued from page 654*)

The patient became more dyspneic, weak and cyanotic, and died 6 weeks after admission.

At autopsy, 2 areas of induration were encountered in the lungs, 1 in the right upper lobe and the other in the left lower lobe, corresponding to the densities noted on X-ray examination. The right-sided lesion was somewhat smaller than the left, but they were otherwise similar. The overlying pleura was finely wrinkled, but it was not penetrated, and there were no associated pleural adhesions. The masses were well-defined but not encapsulated. Their consistency was comparable to that of a bar of soap; that is, they had no resilience, could be indented only slightly with firm pressure, and, when dropped, landed with a dull, flat sound. Resistance to the knife was greatly increased.

The cut surface of the left lower lobe is seen in figure 2. The cut surface remained flat and was a mottled yellow-grey. In the remaining lobes there were small patchy areas of consolidation. In addition, numerous large emphysematous blebs were scattered over the pleura. There were no areas of caseation or cavitation.

Other organs showed the degenerative changes of advanced age but were not otherwise remarkable.

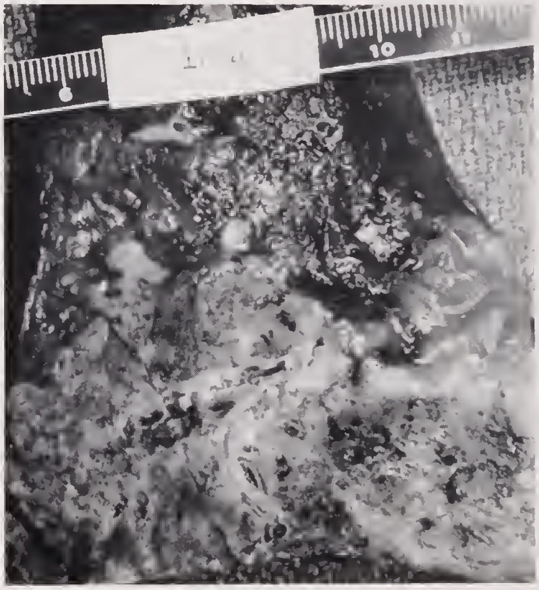


Fig. 2. Cut surface of soaplike area in left lower lobe of the lung.

DO YOU WANT TO RECORD YOUR DIAGNOSIS HERE?

(*See page 678*)

DERMABRASION OF COSMETIC DEFECTS

MURRY M. ROBINSON, M.D.
Washington

ABRASIVE SURGERY has been established as a safe and effective method of treating many types of cosmetic defects. This operation, introduced by Kurtin,[1, 2] is relatively simple to perform, and with a minimum of harmful sequelae has brought happiness to thousands of people who thought that they must go through life with cosmetic defects which, they felt, set them aside from individuals not cursed with similar disfigurements.

In a previous paper[3] I reported on 171 planings. My results then were extremely satisfactory and my enthusiasm was great. Since then, after having performed 573 abrasive operations, I see no need to dampen that enthusiasm. Time and additional problems have only proven how versatile this type of surgery can be. In only 1 type of cosmetic defect did I have to change my opinion—tattoos. This manufactured defect did not respond well. The pigment is deposited much too deeply, and the resulting scar following the removal by the abrasive method is not a great deal better than the original decoration. Although the operation was originally devised by Kurtin for the treatment of postacne scars, its adaptation for removal of other cosmetic defects has yielded equally good and sometimes dramatic cosmetic results (see table 1).

TABLE 1
Salient Data on 236 Cases Treated by Dermabrasion

Diagnosis	No. of Patients	Average of Planings	Results
Postacne scars	187	2.8	Good to excellent
Seborrheic keratosis	6	1.5	Excellent
Adenoma sebaceum	3	2.3	Good
Nevus flammeus	3	2	Good
Traumatic scars	8	3	Very good
Keloid	3	3	Good to very good
Burn scars	2	2	Fair to good
Fixed freckles	3	1	Excellent
Pigmented nevi	4	1.75	Excellent
Tattoos	3	3	Poor
Acne keloid	2	4	Good to excellent
Chloasma	1	2	Fair
Discoid lupus erythematosus	3	2	Good
Senile wrinkling	3	1	Good
TOTAL	236		

Cosmetic defects which can be treated successfully by abrasive surgery are:

1. Pitted scars resulting from:
    a. Smallpox
    b. Chickenpox
    c. Acne
    d. Furunculosis
2. Hypertrophic and deformed scars
    a. Post-traumatic
    b. Resulting from acne keloidalis
    c. Keloids
3. Nevi
    a. Multiple intra-epidermic nevi
    b. Nevus flammeus
    c. Nevus unius lateralis
    d. Multiple spider nevi
4. Pigmentations
    a. Chloasma
    b. Lentigines
5. New growths
    a. Keratoses
    b. Adenoma sebaceum
    c. Verrucae
6. Miscellaneous
    a. Telangiectasia from most causes
    b. Rosacea and rhinophyma
    c. Active lesions and/or scars or discoid lupus erythematosus
    d. Senile wrinkling of the skin

Results in nevus flammeus depend entirely

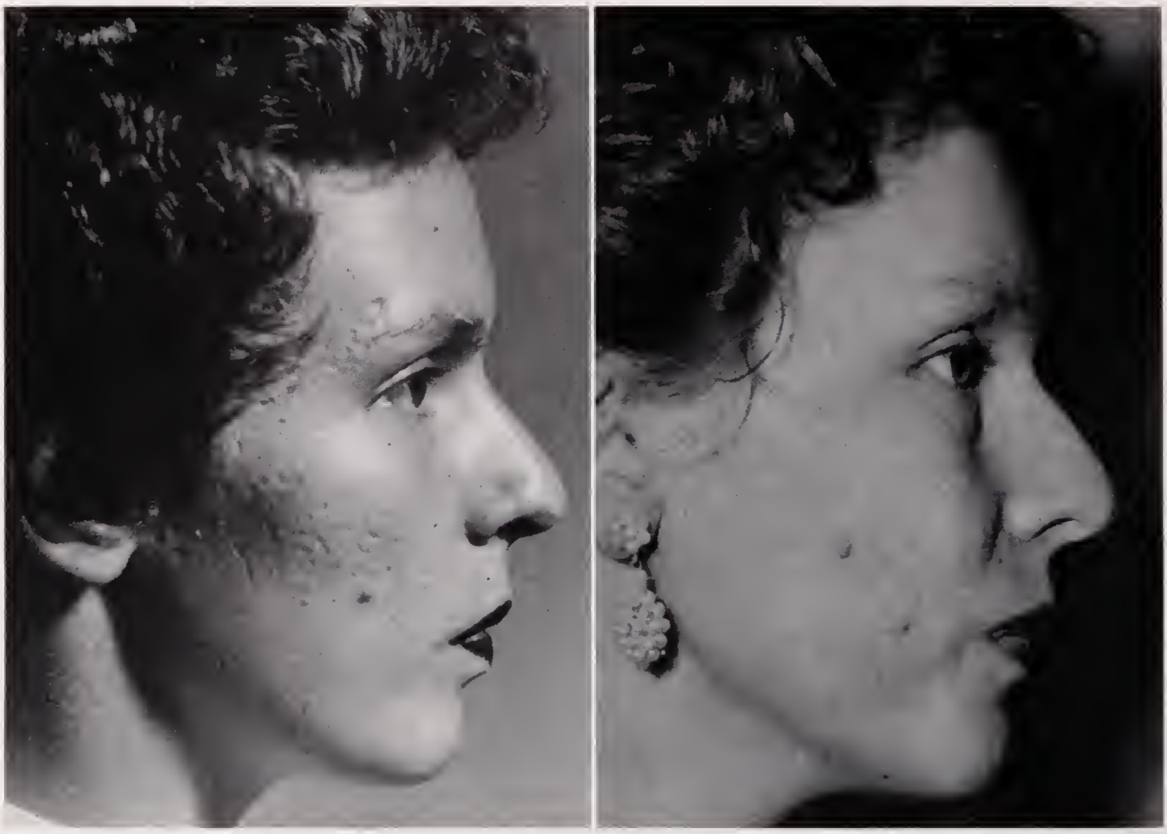


FIG. 1. Postacne scars after 3 dermabrasive procedures.

on the depth of the lesion. Superficial nevi can be removed entirely without resulting scar, while the deeper lesions are improved because the procedure removes the elevated nodules which frequently are a prominent feature of this defect.

Traumatic scars are flattened by the operation so that they are rendered less visible and can be easily masked by ordinary cosmetics. The superficial parts disappear completely, and an uneven contour is leveled.

Keloids respond well, but in order to prevent return the operation must be followed by appropriate X-ray therapy.

Burn scars are markedly benefited by the procedure, but here the skin does not have the vitality of normal skin and in this type of defect one may get some secondary infection.

Fixed freckles are removed in the operative site in one operation, but one must go back to get the areas which were missed.

Dermabrasive surgery is not suggested as a cure of lupus erythematosus but as a method of destroying the active lesions and leveling the old scars. Treatment of the disease must be continued on a medical regimen.

PROCEDURE

Since there has been frequent description of the method, I shall only touch on it briefly. Basically, it is an office procedure which consists of pre-chilling the operative site with frozen plastic bags which are filled with a mixture of 5 per cent diethylene glycol in water. After about 20 minutes of this pre-chilling the skin is frozen solid by 1 of 2 methods: (1) spraying with ethyl chloride while a blower hastens the evaporation, or (2) spraying with a mixture of ethyl chloride and freon without a blower. Both of these methods are quite effective, and each has its own peculiar faults. Some operators prefer one over the other. I prefer the former method as introduced by Kurtin because it freezes a larger area and is less expensive.

When the skin is frozen solid the areas are then abraded with various types of devices revolved by a motor at about 12,000 to 20,000 RPM until a brush burn is produced and the desired amount of leveling is accomplished.

For about 20 minutes after the operation the face burns. The area is then covered by unsterile gauze and the patient allowed to go home. Dressings are changed every 3 to 4 hours by the patient to prevent them from sticking, and removed permanently in 24 to 48 hours when the oozing stops and a crust is formed.

When the crust is formed there is some stiffness and some discomfort. Simple analgesics such as codeine in combination with salicylates are usually sufficient to control the discomfort.

Four days after the operation the operative site is washed gently with soap and water. The crust starts to separate in about 7 days and usually falls off completely in 10 to 11 days, leaving a pink, somewhat scaly surface which gradually becomes smooth and blends into the surrounding areas.

The abrasive devices now have become numerous and varied. In an additional report a detailed description of these abrasive substances is given. For the purpose of this paper, it is sufficient merely to name them.

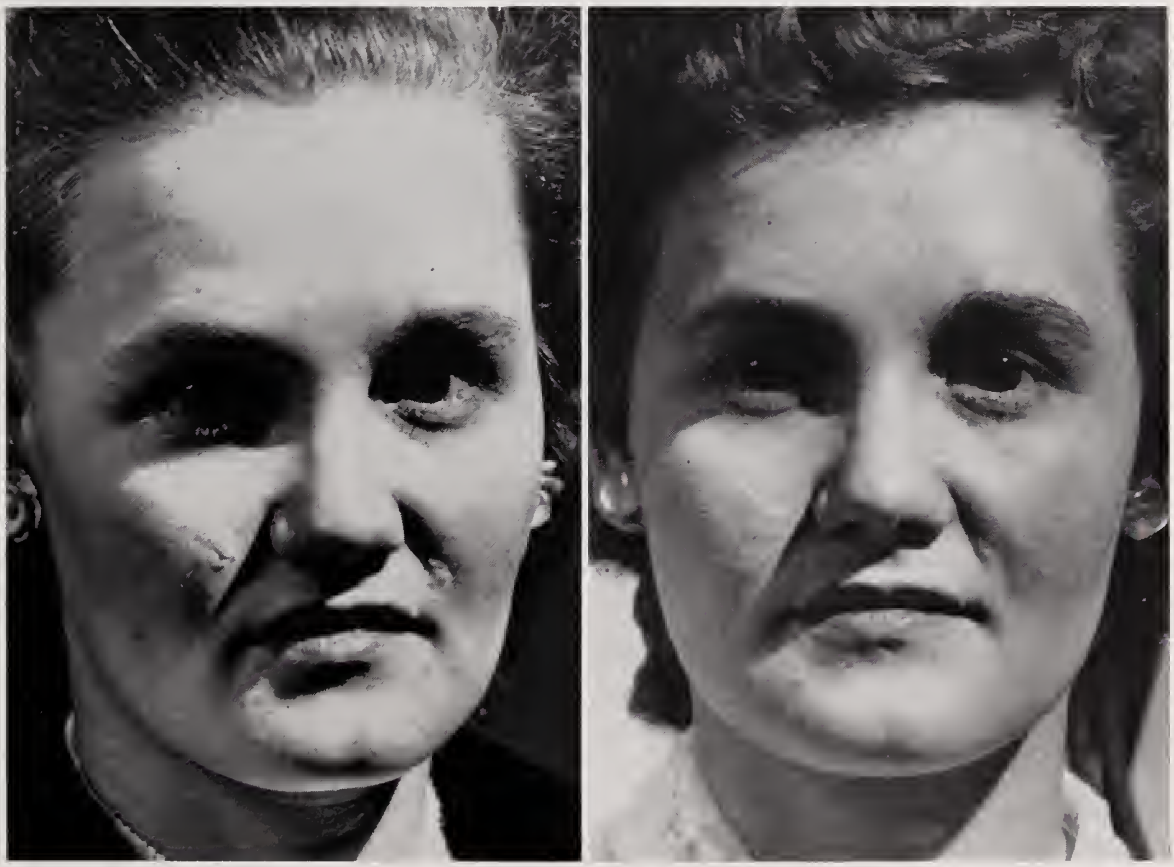


FIG. 2. Almost complete elimination of scars resulting from windshield cuts after 1 dermabrasive procedure. Photograph at right was taken 4 weeks postoperatively.

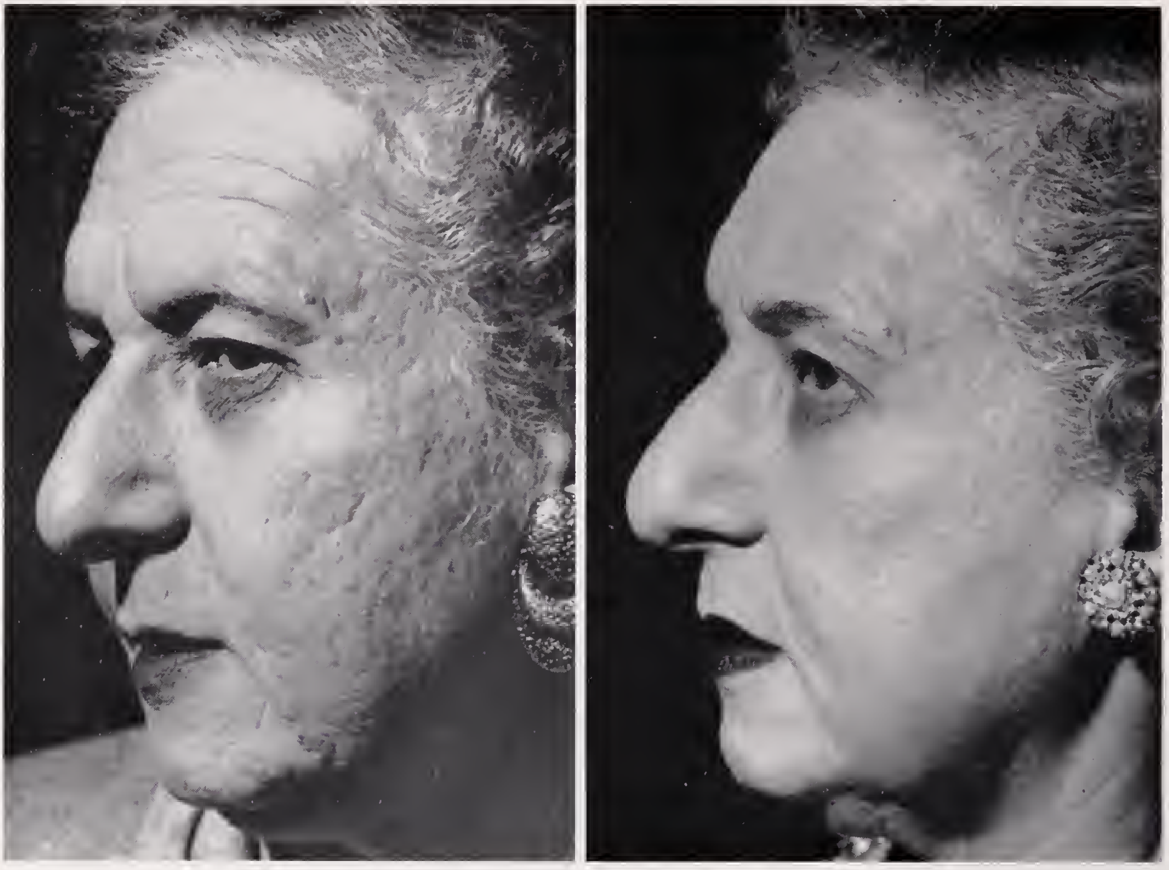


FIG. 3. Postacne pitting and senile wrinkling; results after 2 dermabrasive procedures.

1. Stainless steel brushes (Kurtin)[*] of various widths
2. Diamond wheels[†] of various widths and degree of coarseness
3. Silicon wheels
4. Arkansas stone wheels
5. Serrated steel wheels

All of these abrasive devices have their specific uses, and the versatile operator should not limit his use to any one of them, but should learn to adopt each to meet the particular problem which confronts him.

RESULTS

Taken as a whole the results of abrasive surgical technic are far better than by any previous method of removal of cosmetic defects. Although perfect results are not obtainable (in what procedure can one expect perfection?) the improvement averages about 65 to 80 per cent. Most people are satisfied with that much, and many are enthusiastic. In at least some cases one can completely eliminate the defect without leaving a single trace of the operation. Figures 1 through 4 illustrate the results in 4 patients.

The operation does not require sterile technic. The operative site is washed with pHisoHex, as are the hands of the operator and his assistant, and the abrasive devices are sterilized by soaking them in a bactericidal solution. This is done basically not to make concessions to a sterile technic but rather to obviate cross infection. Sterility is not needed because of persistent tissue immunity to its bacterial flora. Such immunity might not be present to the organisms transferred from one individual to another.

---

[*] Kurtin blower and planer, and steel brushes, courtesy of Robbins Instrument Company, Chatham, N. J.

[†] Diamond wheels, courtesy of Atwood Laboratories, Woodland, Calif.

SEQUELAE

One must keep in mind that although the operation produces a minimal amount of sequelae it is a method of tissue destruction, and is potentially if not actually capable of producing all of the effects of other methods of tissue destruction. One thing which one would expect to get is disturbance of pigmentation. Actually this does occur, but in most cases it is of temporary duration. After a time which varies considerably in different patients the operated site blends with the surrounding skin. In 6 cases pigmentation of the skin has not completely returned after 2 years, but in these cases the operative areas were not on the face.

In my first group milia were frequent sequelae. In the last 200 to 300 procedures this after-effect occurred in less than 10 per cent. I am unable to explain this change. In only 2 cases did I encounter secondary infection. One patient was treated for scars following third degree burns of the face, the other for scars on the neck and chest resulting from neurotic excoriations.

SUMMARY

Here is a procedure that does not require hospitalization or a general anesthetic. It is relatively painless and heals within 10 days, give or take a day or 2. It produces excellent results in a large variety of cosmetic defects and can in all probability be adapted to other uses. It is relatively inexpensive. Sequelae are minimal, and results are good. All patients are benefited, and as yet none has been made worse.

(*Continued on page 706*)

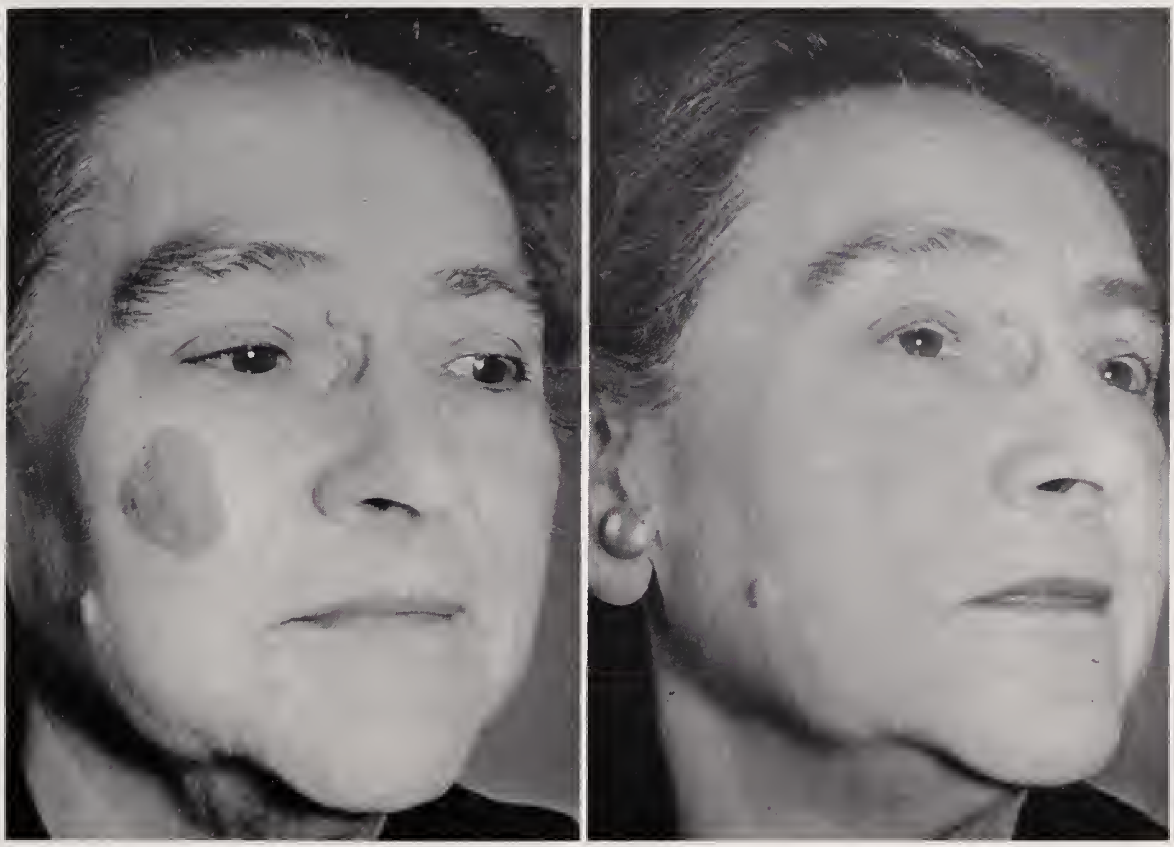


FIG. 4. Pigmented nevus completely removed after only 1 dermabrasive procedure. Photograph at right was taken 2 weeks postoperatively.

A DIAGNOSTIC CASE PROBLEM

(*Continued from page 672*)

Microscopically, paraffin sections reveal that the normal lung substance has been replaced by fibrous tissue containing vacuoles, infiltrated with lymphocytes and macrophages (figure 3). In some areas the vacuoles are contained in the cytoplasm of the macrophages (figure 4), but in other areas the droplets are larger and surrounded only by dense, hyalinized fibrous tissue. Frozen sections are necessary to confirm the nature of these vacuoles. When stained with fat-soluble dyes such as Sudan III, oily masses take the place of the vacuoles. The diagnosis, then, is lipoid pneumonia.

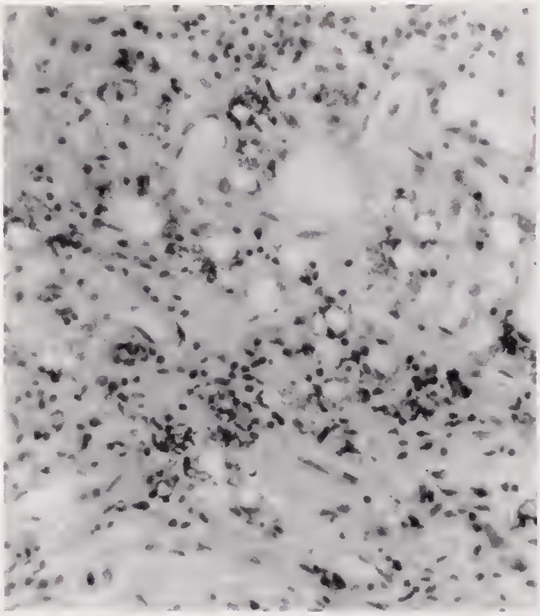


Fig. 3. Low-power view of paraffin section through indurated area in the lung, stained with hematoxylin and eosin.

(After the autopsy it was learned that the patient had taken mineral oil, just before retiring, each night for many years.)

Lipoid pneumonia may be caused by any type of oily substance. The most frequent agents are cod liver oil in the young and mineral oil in adults, chiefly in the very old. Oily nose drops are incriminated less frequently now than a few years ago. The agent reaches the lung directly, apparently flowing around the epiglottis into the larynx and down the tracheobronchial tree to the pulmonary alveoli. Apparently no cough reflex is invoked at this stage, and the cilia are ineffective with the viscid fluid. As increasing amounts of oil accumulate in the lungs there is a proliferative and fibrous reaction. Eventually this will lead to limitation of respiratory excursion and to dyspnea.

Three criteria have been established for the clinical diagnosis: (1) a history of oil ingestion, (2) consistent roentgen findings, and (3) the presence of intracellular oil in the sputum.

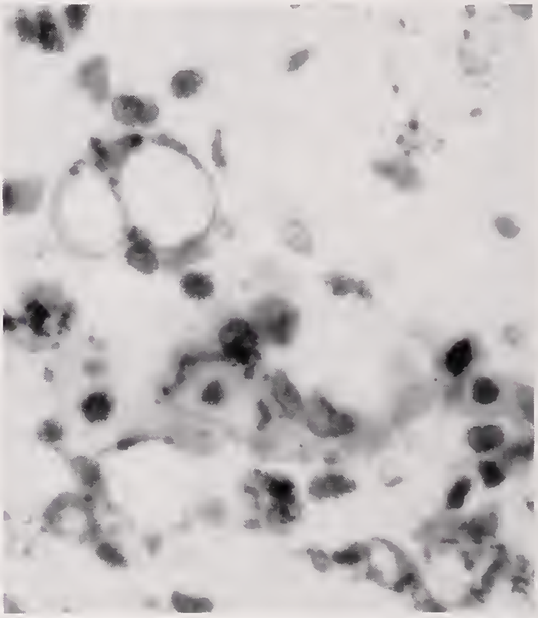


Fig. 4. High-power view of same section, showing character of cellular changes. Vacuoles can be noted within the cytoplasm of the macrophages.

Since there is no known effective therapy, it is important to recognize the inherent danger in long-continued use of these oils.

REFERENCE

Hampton, A. O., Bickham, C. E., and Winship, T.: Lipoid pneumonia. Am. J. Roentgenol., 1955, **73**, 938.

Editor's note: If readers find this type of diagnostic exercise of interest and would like it continued, they should write the Editor of the Medical Annals, 1718 M Street, N.W., Washington 6, D.C.

President's Page

OUR HEALTH DEPARTMENT

The adequacy and efficiency of our Health Department are of vital concern to the people of the District of Columbia. For upon these factors depend in a large degree the health and safety of the people of this community.

Although doctors, like other citizens, are vitally concerned with the Department's conduct, their interest differs in this respect, no Health Department can function effectively without the whole-hearted coöperation of the medical profession, and, conversely, no amount of support will offset lack of public health leadership. Both are essential ingredients of a first-class health department.

The handicap under which our Department officials have labored in the past several years is only too apparent. The greatest obstacle to accomplishment has been the District's type of government. Lest I be misunderstood, let me say that our present District Commissioners are an able group dedicated to the best interests of the District. Nevertheless, they are subject to the will of Congress, which is often not too concerned about the District's affairs. It is not surprising then that the attention and support which it gives the Health Department have been erratic.

As for the people themselves, their interest fluctuates from indignation in crises to apathy during quiescent periods. Civic groups, service groups, professional organizations, and other community groups have shown commendable interest in the Department's progress. However, the results of their efforts have not been as rewarding as they should be.

The purpose of these observations is to emphasize the problems which will present themselves when the successor to the present Director of Health, Dr. Daniel L. Seckinger, takes office in January.

I feel that I voice the views of my colleagues that our organization is concerned not only with the selection of a new Director of Health, but with the support which will be given him and the opportunity which he will have to build for the future. Every effort should be made to overcome the handicaps which have confronted Dr. Seckinger. The aim should be to build a Department which will not only serve the community most efficiently but will be a model for the Nation.

Ralph M. Caulk

Editorials

THE PRESIDENT'S CHRISTMAS MESSAGE

Now peace is the right of every human being. It is hungered for by all of the peoples of the earth. So we can be sure that tonight in the fullness of our hearts and in the spirit of the season, that as we utter a simple prayer for peace we will be joined by the multitudes of the earth.

Those multitudes will include rulers as well as the humblest citizens of lands; the great and the meek; the proud and the poor; the successful and the failures; the dispirited and the hopefuls.

Now each of those prayers will of course differ according to the characteristics and the personality of the individual uttering it, but running through every single one of those prayers will be a thought something of this kind:

May each of us strive to do our best to bring about better understanding in the world. And may the infinite peace from Above live with us and be ours forever, and may we live in the confident hope that it will come.

-From President Eisenhower's Christmas Message, December 18, 1955

THE PLIGHT OF THE INTERNIST

The rendering of medical care is rapidly undergoing socialization—socialization fostered and abetted by the medical profession itself. The profession is regimenting itself voluntarily for two reasons: (1) to circumvent the foisting of compulsory health insurance on the people by the Government, and (2) to make it possible for everyone to obtain "adequate" medical care. These objectives are laudable, but the method of accomplishing them is materially changing long-established customs. For instance, the system of payment for medical services by a third party, such as an insurance carrier or Blue Shield, on a fee-schedule basis is rapidly wiping out the sliding scale, i.e., the establishment of a fee based on ability to pay—a philosophy accepted by the Government for income taxation—and makes no differentiation between the abilities of physicians resulting from years of experience, inborn talent, and diligent study. The physician who has attained preëminence in the profession gets the same fees as the young man just out of hospital training.

Also, to date, the third party, be it an insurance carrier, Blue Shield, labor, management or the Government, does not recognize internal medicine as a specialty but lumps all nonsurgical services together as "medical" services. Thus, an internist may spend an hour and a half taking a history and doing a complete physical examination and receive a small fee for an "office visit." (It is true, too, that most fee schedules for other specialty services are at present unrealistic, i.e., much too low for many procedures.)

Medical services, as opposed to surgical and

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia.

obstetrical services, are just entering the scene in most insurance plans. The internist is the forgotten man. He is not recognized as a specialist. If present nonrecognition continues, internal medicine will disappear as a specialty, and the public will be deprived of the valuable and essential services now rendered by internists. No physician can spend the time an internist does as the "medical sleuth"[1] of medicine and survive economically. Young doctors will not enter the field of internal medicine because to do so will mean starvation.

It behooves internists, therefore, to join forces to convince the public and the vendors of insurance that they are specialists and entitled to fees as such. It was for this purpose that the American Society of Internal Medicine was organized last April in Los Angeles. The American College of Physicians has stated emphatically that it is concerned only with the scientific and educational aspects of internal medicine. State societies of internal medicine are forming rapidly, and already there exists, as of September 18, 1956, the District of Columbia Society of Internal Medicine, which plans to affiliate with the national Society. Internists have no champions other than themselves.

It behooves every qualified internist practicing in the District of Columbia to join the D. C. Society of Internal Medicine and do his part to save his specialty for the American people. The Society must number in its membership 90 per cent or more of internists in order to be able to speak authoritatively for the internists in its representations to all organizations acting as the third party in the payment of fees for medical services.

If something is not done, the plight of the internist may result in the flight of the internist from the medical scene.

---

[1] DE KRUIF, P.: Medical sleuth extraordinary. Readers Digest, September 1955.

MEDICAL SERVICE—1957

The coming year will be a momentous one for Medical Service of the District of Columbia. More doctors will have more patients who receive individually more care covered by the Plan than ever before. There is no letup in public demand for more and better health coverage. Most doctors recognize the importance of keeping Blue Shield in the vanguard of this gigantic social trend both for public and professional good. That is why the year 1957 is expected to serve well our long-range objectives.

The transition from the "old" to the "new" expanded program of Medical Service will be the biggest step by which we approach our immediate objective. It should be understood that for more than a year the old program will continue in effect for those subscribers who desire it, with the fee schedule and income levels as established several years ago.

In addition to this, however, the new program is already in effect for some groups, and as the year goes on more and more will have it. The outstanding features of the new program are the increases in income level and fee schedule, in-hospital medical care after the third day, and coinsurance coverage of diagnostic services and radiation therapy in or out of the hospital.

It is expected that the number of patients under the new program will increase rapidly until it displaces the old one by early 1958. The change which will affect the most doctors is the in-hospital medical care feature, which will bring internists and generalists into functional relation with Medical Service on a wide scale. This participation should make possible a broadening of the coverage as experience dictates the need and possibility.

The operation of the two programs side by side during the year of transition will necessitate some familiarity with the information addressed to all Participating Physicians from the administrative offices of Medical Service. All doctors are urged to keep immediately available both schedule handbooks, the one for the former standard program and that for the new expanded program, so that questions about the coverage of any patient can be quickly and accurately answered.

It is hoped that any constructive suggestions growing out of experience with the joint programs will be transmitted to Medical Service either directly or through the Advisory Committee.

The Board is fully confident that we are on the threshold of a fine period of coöperative endeavor which will result in improved service to the community with increased good to the profession.

Donald Stubbs, M.D.
President, Medical Service of the District of Columbia

REHABILITATION

In the Metropolitan Area of the District of Columbia there are some 140 agencies and facilities having an interest in restoration of the handicapped. Each of these organizations is rendering a service of value. Some have facilities and personnel to give broad coverage, while others render a specific service, though an indispensable one.

The restoration of a patient to his former activity, following an illness, is the concern of each and every physician. The illness may be due to a pathologic process which is completely reversible, or, on the other hand, it may be one in which some degree of residual impairment is permanent. The pathologic process may be organic or psychologic. The original disease may be recurrent, or because of its nature some related disability may result. Such abnormal processes may affect the very young, but the majority of disabilities occur after middle age, increasing percentage-wise as age advances. Such a person requires some type of medical supervision so long as he survives.

This changing picture of medical practice has been impressing itself on the profession for a good many years, with stepped up emphasis during the past decade. The matter of chronic illness and its staggering costs is a concern of Government as well as private agencies. How best to meet this economic and medical problem of the increasing age span and its accompanying increase in the number of handicapped requires the coöperation of all medical, ancillary and welfare disciplines.

The thread of medicine runs through the entire structure of rehabilitation services. However, medicine alone does not suffice, since income, family, and community social structures are involved. These latter require social and welfare assistance. Restoration further requires such disciplinary aids as physical therapy, counseling, nursing, etc. Since these aids to rehabilitation have broad medical implications, it is necessary that responsibility be vested in one person or team, in so far as directional help to the individual is concerned. The physician is a key person in this responsibility.

The problems which confront the community and the Council in caring for this group of handicapped persons are many: (1) identification of existing agencies; (2) what professional and/or welfare service is offered by a given agency; (3) how the individual is to secure complete aid by help from multiple disciplines; and (4) how duplications may be integrated and deficiencies supplemented. These are but a few areas of needed information.

The Council on Rehabilitation has the above problems for study and clarification. Funds for this study are provided by the Office of Vocational Rehabilitation of the Department of Health, Education and Welfare. The Council involves the Medical Society of the District of Columbia and the adjacent Medical Societies of Virginia and Maryland. Its office and staff are housed in the D. C. Medical Society building. Subcommittees in all disciplines of rehabilitation are in the process of formation, and investigative activity is well under way. Physicians are being asked to serve on committees actively engaged in investigations and in compilation of reports. The Council will ultimately make its report to all medical societies and agencies concerned. The participation of the members of these societies in this project is in the interest of a well planned and integrated rehabilitation program. It is hoped that out of this study will come a referral center, benefiting the indigent of the Metropolitan Area as well as "private" patients.

Preston A. McLendon, M.D.
Chairman, Council on Rehabilitation,
Washington Metropolitan Area

In and Out of Focus

BY THE OBSERVER

The Editor's Silver Anniversary With the December issue the Medical Annals will conclude 25 years of uninterrupted publication. Volume I, Number 1 of the Annals, which made its appearance in January, 1932, was rather modest compared to today's journal. Nevertheless, it was properly looked upon as a forward-looking and highly important venture.

One of the articles which appeared in the initial issue was written by the late Dr. John Benjamin Nichols, then Past President of the Society (1912). Dr. Nichols reviewed briefly the history of the Society's publications. One of the first, if not the first, was the *National Medical Journal*. Short-lived, it began publication in 1871, expiring with the second volume. In 1874 the Society published *Transactions* in quarterly numbers. There were five volumes before publication was suspended in 1878. Another transient local journal was the *National Medical Review*, of which there were only seven numbers published in the years 1878–79. This publication was followed by Walsh's *Retrospect of American Medicine and Surgery*, a quarterly which continued in existence for three years, 1880–1882.

Then it appears that the *Maryland Medical Journal* became the medium through which the proceedings of the Society were made known to members. This arrangement continued from 1883–1885, in which year the Society entered into an agreement with the *Journal of the American Medical Association* to carry its proceedings. This arrangement was in effect from 1885–1889.

The *National Medical Review* was revived in 1892 and flourished for 9 years, expiring in 1901. This journal was privately owned, but it was an authorized vehicle for the publication of Society material. One of the leading figures in Washington medical circles around the turn of the century was Dr. Daniel S. Lamb, the Society's historian, who established the *Washington Medical Annals*, which was published under the auspices of the Society as its property and official organ from 1901–1920. It flourished until the beginning of World War I, when it began to fade. In 1918 it consisted of only 4 of the regular 6 numbers; in 1919, only 2. Volume XIX was represented by only 1 number.

The *Bulletin* of the Society, which was established in 1924, was published until 1932, when it gave way to the Medical Annals. In the beginning, the editorial staff of the ANNALS consisted of Dr. Wallace M. Yater, Editor, and Dr. Coursen B. Conklin, Managing Editor. Associated with them was what was known as a Committee on Publication, members of which were Dr. Yater, Chairman; Drs. James W. Esler, Fred R. Sanderson, Charles R. L. Halley, and William P. Argy. Of this group only Dr. Yater is still actively associated with the ANNALS.

It has been your Observer's privilege as Managing Editor of the ANNALS to have served with Dr. Yater during 18 of the 25 years that he has been Editor. It would be presumptuous for him to comment on Dr. Yater's outstanding editorial ability, because he is nationally known for the quality of his medical writing. However, he can testify to Dr. Yater's untiring efforts on behalf of the MEDICAL ANNALS and the great pride he has taken in it. Dr. Yater has steadfastly sought to improve the quality of its scientific content, often against great odds. On many occasions he has literally "burned the midnight oil" to keep the material up to the highest possible standard.

Undoubtedly there are a number of our members, perhaps a majority, who are unfamiliar with Dr. Yater's duties as Editor. First of all, he is responsible for all the material appearing in the MEDICAL ANNALS whether it be of a scientific or general nature. In other words, he decides what is or is not to be printed. In addition, he personally edits all scientific articles. Fortunately, he has had the coöperation of an excellent Editorial Board, to members of which he refers articles on subjects in which they are individually expert. They advise him with respect to the quality of the contribution and whether in their opinion it is worthy of publication. At present the Board consists of the following: Drs. Frederic G. Burke, Frank D. Costenbader, Winfred Overholser, Thomas M. Peery, Herbert P. Ramsey, R. Lee Spire, Donald Stubbs, and Charles Stanley White, Sr. On the Editor's staff in the Society's headquarters are the Secretary of the Society, who is Managing Editor, and the Assistant Editor, Miss A. Louise Eckburg.

Congratulations and expressions of appreciation to Dr. Yater on his Silver Anniversary as Editor of the MEDICAL ANNALS are in order. No member of our Society, past or present, is more deserving of recognition for faithful and outstanding service to his medical organization than he.

★

Impartial Medical Testimony

The so-called "battle of medical experts" in our courts has been the subject of much unfavorable comment inside and outside the medical profession. Some jurists have been particularly concerned because, as one stated recently, "Accident cases constitute about 80 per cent of the courts' business, and the medical aspects of those cases take up a large part of the trial time." Expert medical testimony by contesting doctors on which a judge or jury must determine the facts, they insist, is, to say the least, unsatisfactory.

One of the reasons advanced for this by the Honorable David W. Peck, Presiding Justice of the New York Supreme Court, in the October 1956 issue of the *American Bar Association Journal*, is that such testimony is given by "medical mouthpieces" paid by opposing parties to the litigation, and is therefore frequently biased. Juries in particular, he states, cannot rely upon the testimony of such experts for dependable guidance. Both competency and honesty, he suggests, are frequently questionable, experts being chosen not primarily for their medical qualifications and integrity, but because they possess a personality appealing to the jury.

These and other shortcomings of the long accepted system, Judge Peck states, prompted the Justices of the Supreme Court of New York County, with the coöperation of the Bar Association and medical societies, to develop a plan which would make it possible to obtain impartial medical testimony. Under their joint sponsorship, a panel of outstanding experts in the various branches of medicine has been established. These experts have agreed to respond when called upon by the Court to examine and report on conditions of plaintiffs in personal injury accidents and, if necessary, to testify in court.

The problem of selecting the panel was assumed by the New York Academy of Medicine and the New York County Medical Society. These organizations chose physicians on the basis of their qualifications and well-known abilities in their particular fields.

Funds required for the implementation of the plan were provided through grants by the Alfred P. Sloan Foundation and the Ford Motor Company Fund, Inc. Each contributed $20,000. Although there were some administrative expenses, they were minimal, the principal cost being for expert testimony. There is no schedule of fees imposed on physicians because the services required of them vary widely. They submit their bills on the basis of their ordinary charges to patients in moderate circumstances. It appears there has been no difficulty on this score.

It was agreed in the beginning that it was not necessary to process every case through the panel. Sponsors were aware that if this were done, it would result in placing a too heavy burden on the independent experts and would also result in unwarranted expenditures. Members of the panel, it was decided, were to be employed only where there was "a sharp and substantial difference between parties and their own experts as to the nature and extent of the injuries. These are the cases which take the longest to try and are the hardest to settle. They are the cases in which the panel can be most effectively employed in resolving the controversy, inducing a settlement and relieving calendar congestion."

In selecting cases for assignment to the panel, a screening process has been adopted. The device is called the "pretrial conference." If the Court determines that the litigation is of a medical nature, a member of the panel is requested to participate. He is selected from the list provided for the purpose on a rotation basis.

An appointment is made for the panel member to examine the plaintiff, following which he submits his findings, one copy to the judge and one each to the plaintiff's and the defendant's counsel. Thereafter, there is a pretrial conference in which an effort is made to effect settlement.

In a majority of instances, Judge Peck states, the report of the impartial medical expert is sufficient to bring about settlement. Often, other attempts to do so have been unavailing. There are always those cases, he admits, where settlement cannot be effected. In this event, the case goes to trial, and the impartial medical expert is required to testify for the Court. He is paid for his services out of Court funds and not by either of the parties to the suit, and is therefore at no time a partisan expert.

The plan is not without its critics. A few lawyers have expressed the opinion that the expert should not be allowed to testify at a trial. They do not object to his participation in the pretrial conference on the case, but they do feel that the jury "should not be exposed to what might be the influence of the independent expert by reason of his position as a Court-designated expert." In reply, Judge Peck observes that "no halo is placed around the independent expert. He is open to full examination and cross-examination as an ordinary witness. The Court charges the jury that his testimony is not to be accepted or given any particular weight merely by reason of his identification." Furthermore, "there is no reason to think that a jury which has the undoubted responsibility of weighing evidence and determining the facts and which has the presumed capacity for performance of this function cannot properly weigh and evaluate the evidence of the independent expert."

The New York experiment, now 2 years old, has been discussed at various times by the District Medical Society's Committees on Professional Liability Insurance and Coöperation with the Bar Association. There have also been joint meetings between these committees and representatives of the District Bar Association at which this plan has been under discussion. A few have been enthusiastic and would like to see it tried in the District of Columbia. There are others, including both lawyers and physicians, who are skeptical, although they have not closed their minds to the desirability of experimenting with the plan. The position of the majority might best be described as "wait and see." They are desirous of more conclusive evidence than is at present available that such a scheme will be of benefit to all parties concerned.

★

Face to Face BELL SCIENTISTS UNVEIL PICTURE-PHONE! This intriguing headline appeared in the October, 1956 issue of *The C and P Call*, a house organ of the Chesapeake and Potomac Telephone Company. Readers are informed that a telephone which will transmit pictures along with sound had "taken a long step forward." Although still in the experimental stage, recognizable pictures had been transmitted by telephone from "as far as from New York to Los Angeles."

Pictures, *The Call* reported, vary in size from 1½ by 3 inches to 2 by 3 inches, and can be readily seen from a distance of 2 feet. "Unlike television, which sends 30 pictures a second and uses higher frequencies requiring a relatively expensive coaxial cable and microwave relay systems," *The Call* explains, "the picture-phone displays a new picture every two seconds." An additional telephone line is necessary to carry the picture into a receiving unit in the home or office.

As he read this report, your Observer reflected on what this innovation would mean to a physician. He concluded that in most instances it would be helpful, especially in emergencies. Voices can often be misleading, but when they are combined with the face of the person, it may be quite a different matter. Face and manner tell a lot.

All physicians have endeavored at one time or another to imagine the appearance of an individual whom they had not seen from his or her voice. Complications, amusing and otherwise, might have been avoided if they had not had to rely upon their imaginations. Differences, too, might have been more readily ironed out if there had been an opportunity of seeing as well as talking to the individual.

How about the patient's end of the line and the impression he gains of the physician during the visual wire conversation? If the patient has not seen the physician before, the image on the picture-phone may very well be a determining factor in the future relationships. Where regular patients are concerned, they will be more sensitive to the physician's display of irritation or lack of interest. Certainly there should be much less chance of misunderstanding with respect to the physician's instructions than in ordinary telephone conversation.

There are undoubtedly other areas in which transmission of recognizable pictures via telephone will be helpful to the physician and his patients. Even those mentioned should contribute to the improvement of the physician-patient relationship.

Of course, these observations are predicated upon widespread use of the picture-phone. It is quite evident that while transmission has been successful experimentally, general acceptance and use are still some years in the future.

★

On the Defensive Physicians have reacted in various ways to the criticism that the medical profession is not progressive where changes in providing medical care are concerned. Among them are those adhering to readily recognized schools of thought, of which the following seem to be representative.

There are what might be called the moderate and radical progressives. The former believe in need for change, but they would not move too rapidly. "Evolution not revolution" is their slogan. The moderates embrace a sizable segment of the medical profession at the present time. They might be said to have a large voice in the policies of the American Medical Association, although it is not certain they make up a majority of the membership.

The radical progressives have little patience with the moderates, insisting that immediate and realistic action is long overdue; that it has long been apparent that drastic action is required if the people are to receive medical care on a basis satisfactory to them. No halfway measures will suffice, they insist. It need not be said to readers of this column that this group is distinctly in the minority.

Probably the group that is representative of the majority consists of those physicians who are more or less of the view that the public would fare better if the status quo in medicine prevailed. They go along with changes, but do so reluctantly in the belief that present-day experiments in the provision of medical care will eventually be discredited. They resent bitterly the criticisms being heaped upon the medical profession, insisting that they are unjust and that they should be answered in kind.

Dr. John T. Farrell, President of the Philadelphia County Medical Society, appears to be one of this group. He states in his President's Message in *Philadelphia Medicine* for October 12, 1956, that the criticism charging the profession with being reactionary is unjust. He cites the unfair attitudes of lay persons with whom the profession comes in contact. As an example, he relates the following: "The public relations officer of a medical society taking a news item to a newspaper was asked by the editor, who knew of the officer's interest in medical affairs: 'Well, what are the doctors against now?' "

> "He might have been told," Dr. Farrell writes, "we are against the silly assumption that change is necessarily improvement, that we have always been against anything detrimental to the public's health, that we are against any plan aiming to take from us the care of the sick or come between the patient and his physician, that eighteen years ago we were against the inclusion by Blue Cross of medical service in its contracts—an inclusion which has cost the community many millions of dollars in increased costs for the maintenance of hospitals—and that we are against being exploited no matter under what guise the attempt to foist the exploitation may come.
>
> "Another question often asked in an accusing tone is: 'Well, if you don't like our proposals, what changes do you suggest?' This fatuous query again is based on the foolish notion that change of itself means improvement. It also implies that an unacceptable proposal should provoke an alternative and not be considered refuted simply by well-founded objection."

How to cope with this situation? Dr. Farrell says that we are not defenseless, and that the best defense is "simple and direct" offense. He suggests that the following questions might be asked in return: "Why do you want this change?" "Why are you so interested?" "Whom is your plan going to benefit besides you?" "Just what do you expect to gain in the way of power, prestige and income, and at whose expense?" These questions, he says, will place the offender on the defensive and in many instances reveal that he has an axe to grind. As examples he gives hospital administrators who wish to increase their powers and prestige, leading to increase in their salaries; advocates of insurance schemes who wish to enlarge their sphere of activities and income; and public health and welfare workers who wish to improve their situations and salaries.

One can sympathize with Dr. Farrell's views, although one regrets his failure to mention how John Q. Public feels about all this. The fact of the matter is that insistence on change in methods of providing medical care is not due alone to hospital administrators, insurance executives, public health and welfare workers. Times change, as do the demands of the people, who in the final analysis will determine the future of medical practice.

It is significant that not only in our own country but throughout the world there is increasing insistence upon security. There is little doubt that it stems from the experience of the people during the Great Depression and World War II which followed.

It may well be that this generation will find that its search for security is an illusory one, and that the present trend will be reversed. In the meantime, patience, understanding, and sound leadership are demanded of the medical profession.

It is understandable that in such confused times as these Dr. Farrell and those who think like him resent the charges implicit in the questions propounded to the medical profession. It goes without saying that many of the finest accomplishments of organized medicine are overlooked in discussions of the controversial medical care issue. Nevertheless, this is a problem which is not an illusion but a reality, and must be met in a statesmanlike manner.

★

"... Without Precedent..." According to the August issue of the *Statistical Bulletin of the Metropolitan Life Insurance Company*: "The rise in child population in the United States following World War II is without precedent in our history." The gain during this period was more than 14,000,000; the population of our children in the ages under 18 years reached a record total of 55⅔ million.

"The situation," the *Bulletin* states, "reflects essentially a new outlook toward family life by our young people." The number of them now married, it is pointed out, is at an all-time high. The record also shows that our youth are not only marrying but starting their families earlier.

The trend in our juvenile population since the turn of the century, except for one decade, has been upward. From 1900 to 1930 the number of children under 18 years of age rose from nearly 31 to 43 million. However, there followed a decline between 1930 and 1940, the total being reduced from the above figure to 40,367,000. It is worthy of note that this drop occurred during the late Great Depression.

As was to be anticipated, this had a pronounced effect upon the subsequent population structure. For example, the number of children under the age of 5 during the period 1945 to 1955 increased by 41 per cent. At the ages 5 to 9, it was 50 per cent. Between 10 and 14, 24 per cent. However, in the 15 to 17-year age group, there was a small decrease. These then were the children born during the depression years and just before World War II, when the birth rate was relatively low. The spectacular upsurge in the lower age groups following the War will, of course, result in a corresponding increase in the number of teenagers during the next few years.

In its study the *Bulletin* found that most of our children have "the benefits of normal family life." Almost 48,000,000 children under 18 years of age, or about 7 out of every 8, were living with both parents in 1955. Over and above this number, 600,000 were living with only the father present in the household, and about 5.2 million with the mother only. One-half million children of the latter were children whose fathers were absent in the Armed Forces. There were under 1,000,000 living with relatives other than parents, and less than half that number under other arrangements.

The *Bulletin* comments: "The proportion of children living with both parents reflects in part the favorable mortality trend in this country. This has saved a great many children from orphanhood and kept for them the advantages of care and support by both parents." In 1920 about 6.4 million children under 18 years of age—16 per cent of the total—had lost one or both parents by death. This figure was reduced in 1955 to 2.7 million children; less than 5 per cent of the total were orphaned and the great majority were living with the surviving parent.

As to the educational opportunities, the Bureau of the Census reported in October 1955 that 78 per cent of the children at the ages 5–6 were attending school. This figure rose to 99 per cent at ages 7–13 years, but fell to 96 per cent at 14–15 and to 77½ per cent at the ages 16–17 years. The decrease in the latter age group is explained by the fact that a number of them entered economic life with the approach of maturity. Girls in particular sought marriage, about 10 per cent of those in the ages 16 and 17 being married. Each year about 140,000 in this age

(Continued on page 706)

SPECIAL REPORTS OF THE EXECUTIVE BOARD AND COMMITTEES*

As usual at special business meetings of the Society, the Executive Board's report will concern itself only with the matters listed on the agenda which was sent to each Active and Life member.

Dependents' Medical Care Program. As pointed out in the report submitted to the membership by the Committee on Medical Care, the Dependents' Medical Care Program has deep significance for physicians, not only in the District of Columbia but throughout the country. Not that the demand for physicians' services under the program will locally at least be too burdensome but, as the report stated, it sets a precedent in Government-physician relations. Whatever our feelings may be in the matter, one thing is clear to the Board, the only course for us to pursue is one of wholehearted coöperation.

After all, the Dependents' Medical Care Act became law largely because of the protests of physicians that the Doctor Draft Law was discriminatory, and that too many physicians were taken into the Armed Forces whose duties thereafter consisted largely of caring for dependents of military personnel. Congress came to the same conclusion, with the result that the Dependents' Medical Care Act came into being.

Obviously, the Act holds wide appeal and the medical profession's participation will be subject to close scrutiny. You will be interested in the fact that all state medical societies have voted to participate. Twelve of these have decided to handle the fiscal aspects of the program themselves; 34 have chosen the Blue Shield organization in their respective states; 1 chose a commercial insurance company; and 1 is still uncertain as to its choice.

The Board is convinced of the soundness of the Committee's position that our own Blue Shield Plan, Medical Service of the District of Columbia, be chosen as the Society's fiscal agent. In fact, in its opinion this is the only logical choice, because the Service is a creation of the Society and is well equipped to handle efficiently the fiscal matters involved. It was made clear in the Committee's report that the Service will have nothing to do with setting fees, but will merely act as the administrative body for the Society. Incidentally, in accordance with a directive of the Secretary of Defense, dated September 19, 1956, in any state in which a fee schedule is not agreed upon, the Department of Defense will promulgate one, such as was done in Veterans Administration's Home-Town Care Program.

At a recent meeting the Board voted unanimously to recommend to the Society the adoption of the Committee's recommendations and that, if adopted, the Society, through its President and Secretary, be authorized to enter into a contract with the Department of Defense on the basis of the following recommendations of the Committee on Medical Care:

1. That the Medical Society of the District of Columbia agree to coöperate with and participate in the program for providing medical care for dependents as defined in this Act.
2. That the fee schedule to be submitted to the Department of Defense be one of fair and reasonable fees as determined by the Committee on Medical Care through consultation and study.
3. That the said fee schedule be subject to review and negotiation between this Society and the Department of Defense on an annual basis.
4. That the Medical Society of the District of Columbia recognize the existing local Blue Shield fees are not fair and reasonable fees adequately compensating the physician or covering the public under all circumstances within the meaning of this Act.
5. That a regulation be sought from the Secretary of Defense authorizing the Medical Society of the District of Columbia to make such fee schedule recommendations as be needed under the proposed program.
6. That the local Blue Shield Plan, known as Medical Service of the District of Columbia, be recommended to the Department of Defense as the desired fiscal agent for the Medical Society of the District of Columbia in so far as Public Law 569 is concerned. Permission is not implied or granted said Medical Service of the District of Columbia to enter into any consideration of the proposed fee schedules under this Act in any manner whatsoever.
7. That the Medical Society of the District of Columbia enter into negotiation with Medical Service of the District of Columbia on a long-range plan to more closely approximate present and proposed Medical Service fee schedules to the fair and reasonable fees prevailing in the community where inequities exist. It must be clearly

---

* Abridged for publication, these reports were adopted at a special Business Meeting of the Medical Society of the District of Columbia, October 30, 1956.

understood that such negotiation must take into consideration the subscriber to the plan as well as the physician rendering the service. This negotiation is vital in view of the projected expansion of coverage by Medical Service as concerned with procedures and income limits as well as by definite trends occurring in the social and economic life of the entire community.

The Executive Board recommends further that before the contract is formally entered into, the Society's membership be canvassed to obtain names of all individual physicians who wish to participate in the program.

The Society has been notified by the Surgeon General's Office of the Army that its representatives are invited to be present to sign agreement for the Society on November 14, 1956.

Restoration and Remodeling of 1710 M Street, N.W. The Board has long been concerned about the conditions existing in the property adjoining this building. The difficulty was to come to a decision as to the best use which could be made of this property.

Various proposals have been made but, in the Board's opinion, those submitted by the present House Committee seem the most feasible of any submitted to date. They are:

Plan I. To renovate and remodel the basement, which is roomy and above ground level, for the additional office space which is now required, and that a fireproof vault be built immediately adjacent to the office, under 1718 M Street, N.W. The first floor would continue to be used as offices with such improvements as are required to make the renovation and remodeling first class. The second, third and fourth floors would be used for efficiency apartments.

The overall cost of this project, it was estimated by builders, would be in the neighborhood of $88,000. They were confident there would be a 6 per cent return on the investment.

Plan II. This plan contemplates the use of the basement for offices and the vault previously described; the first floor to be used as it now is; the second floor to be taken over by the Society, the front half being used for committee rooms, the back half to be rented to a health or other organization acceptable to the Society.

This plan provides for the construction of a passageway between the second floors of the two buildings so that the committee rooms would be readily accessible. The upper two floors would not be in the first-class condition envisioned in the first plan, but would be renovated and essential repairs made so as to attract renters desiring better accommodations than now exist.

Builders estimate that the cost of this plan would be about half of the first, or about $45,000. As more of the space would be used by the Society and the apartments would be less desirablé, returns on the investment would be considerably less.

Plan III. This plan would be the same as Plan II, except that the third and fourth floors would be converted into efficiency apartments. Income from rental under this plan would be less than Plan I, but substantially larger than Plan II.

The Board voted to authorize expenditures for detailed drawings of the above plans for the purpose of obtaining bids.

When the bids have been received they will be presented to the Society with the Board's recommendations. This should be not later than the March business meeting, and perhaps before, depending upon when the required information is available.

S.M.A.'S GOLDEN ANNIVERSARY MEETING

More than 5,000 members and guests gathered in Washington, November 12–15, to attend the 50th Annual Meeting of the Southern Medical Association. The scientific sessions and the scientific and commercial exhibits were held at the Sheraton-Park Hotel. Washington physicians were host to the Southern Medical, with Dr. Oscar B. Hunter, Jr., as Chairman of the Committee on Local Arrangements. Dr. Marcel J. Foret was Chairman of the Program Committee for D.C. Day, when papers were presented by Washington physicians and staff members of the National Institutes of Health. The names of participants in the program for D.C. Day appeared in the October issue of the Medical Annals.

Dr. Hunter presided at the First General Session, November 12, which was held in the Grand Ball Room of the Mayflower Hotel. A pleasant surprise after the meeting opened was the reading of a special congratulatory letter from President Eisenhower.

Dr. Ralph M. Caulk, President of the District Medical Society, gave a brief address of welcome in behalf of the Society. He conferred the Certificate for Meritorious Service, given annually by the Society, to Dr. Margaret M. Nicholson, Washington's beloved pediatrician, and the John Benjamin Nichols Lay Award, an inscribed bronze plaque, to Mr. Joseph H. Himes, President of Group Hospitalization, Inc. Dr. W. Raymond McKenzie delivered the Presidential Address—"A Fifty-year Review of Medical Progress," following which Mr. C. P. Loranz, who served as Secretary of S.M.A. for 42 years, gave an illustrated address commemorating its fiftieth anniversary.

Music was furnished by the Doctors' Symphony Orchestra, with Richard Dirksen as Director and Dr. Isadore M. Alpher as concertmaster. Dr. Richard H. Todd, President of the Orchestra, gave a brief account of how the orchestra came into being.

Dr. W. Kelly West, of Oklahoma City, Okla., First Vice President of S.M.A., presided during the latter half of the meeting and introduced Dr. McKenzie, Mr. Loranz, and Dr. George F. Lull, Secretary of the American Medical Association, who extended his congratulations to the Association in behalf of the A.M.A. Dr. West was later chosen President-elect of the Association.

Dr. J. P. Culpepper, Jr., of Hattiesburg, Miss., took office as President of the Association at the second General Session, held in the Williamsburg Room of the Mayflower Hotel, November 14. Dr. David B. Allman, President-elect of the American Medical Association, gave the principal address—its title, "Who Will Carry the Torch?" The Past President's Medal was presented to Dr. McKenzie. Dr. Curtice Rosser, of Dallas, Texas, was recipient of the first Distinguished Service Award, in the form of a handsome gold medal, for his contributions to the advancement of medicine.

Washington physicians presented many of the papers, scientific exhibits, and motion pictures throughout the four-day meeting. Papers presented by Medical Society members following the opening day were:

Section on Allergy: "The Use of Gamma Globulin," Dr. Harry S. Bernton

Section on Anesthesiology: "Anesthetic Management of Patients with Cardiovascular Diseases," Dr. Charles S. Coakley; "Treatment of the Patient in Shock," in Panel Discussion on Shock and Its Treatment, Dr. Thomas F. McDermott; "Medicolegal Aspects of Anesthesiology," Dr. Samuel M. Becker; "A New Muscle Relaxant Drug," Drs. Jane B. McKewen, Jack R. Woodside, Juliana del Rosario, and Donald Stubbs

Section on Dermatology and Syphilology: "The Use of the S-Factor of Liver Extract (Kutapressin) in Dermatology," Dr. Edwin E. Barksdale; "Chloranil in the Treatment of Psoriasis: A Substitute for Chrysarobin," Drs. Walter Teichmann and Peter N. Horvath

Section on General Practice: "Definitive Diagnosis of Headache and Its Treatment," Dr. Lester S. Blumenthal

Section on Industrial Medicine and Surgery: "Medical Standards for Licensing Drivers of Federally-owned Motor Vehicles," Dr. Verne K. Harvey

Section on Medicine: "Experience with Diagnostic Renal Biopsy," Drs. George E. Schreiner and Leonard B. Berman; "Newer Anatomical Features of the Central Nervous System," Dr. Arthur A. Morris, the latter before a joint session with the Section on Pathology

Section on Neurology and Psychiatry: "Ten Year Follow-up on the Use of Cranio-plastic in the Repair of Cranial Defects," Dr. William T. Spence; "The Role of the EEG in the Differential Diagnosis of Brain Tumor," Dr. James Peter Murphy; "New Chemical Tests in the Diagnosis of Neurological Disease," Drs. Elizabeth Roboz and Francis M. Forster; "One Aspect of the Medical-Legal Implications of Shock Therapy," Drs. Isadore Rodis and Robert H. Groh; "Modern Treatment of Epilepsy," Dr. Bushnell Smith

Section on Obstetrics: "Thyroid Disease in Pregnancy," Dr. James C. Walsh; "The Large Baby," Drs. James H. Nelson and Irwin W. Rovner

Section on Ophthalmology and Otolaryngology: Chairman's Address, Dr. William J. G. Davis; "Mycotic Keratitis," Drs. Thomas E. Haggerty and Lorenz E. Zimmerman; "Operations on the Nasal Accessory Sinuses," Dr. Daniel B. Moffett; "Sinusitis, Diagnosis and Office Management," Dr. Victor R. Alfaro. The last two papers were included in a Symposium on Sinusitis, Recent Advancements.

Section on Pediatrics: "Nonopaque Foreign Bodies of the Air Passages in Children," Dr. Isidore Lattman; "Newly Isolated Viruses in Respiratory Disease," Dr. Robert H. Parrott. Drs. Allan B. Coleman, Sydney Ross and Jonathan M. Williams were panelists in a Panel Discussion on Meningitis in Childhood.

Section on Proctology: "The Coëxistence of Adenomatous Polyps and Diverticulitis of the Sigmoid," Dr. A. F. Castro. Dr. Garnet W. Ault was a panelist in a discussion of the Diagnosis and Management of Bleeding per Rectum, in joint session with the Section on Surgery.

Section on Surgery: "Management of Substernal and Intrathoracic Goiters," Dr. Brain Blades; "Indications for Splenectomy," Dr. Robert J. Coffey

Section on Urology: "The Management of Inoperable Cancer of the Prostate," Dr. William P. Herbst, Jr.

Geriatrics Symposium: "Geriatric Ophthalmology," Dr. John Harry King, Jr.

Following is a list of the physicians, and the medical school or hospital with which they are affiliated, who took part in the Scientific Exhibit:

"GRAND ROUNDS" ATTRACTS CAPACITY AUDIENCE
(Story on page 697)

Section on Dermatology and Syphilology: "Removal of Cosmetic Defects by Dermabrasive Surgery," Dr. Murry M. Robinson

Section on General Practice: "Chronic Headache," Drs. Lester S. Blumenthal and Marvin Fuchs, George Washington University Hospital; "Anticoagulant Therapy Controlled by a Simple Blood Prothrombin Test," Dr. Benjamin Manchester, George Washington University and D. C. General Hospitals

Section on Gynecology: "Treatment of Cervical Erosion," Dr. I. Phillips Frohman and Mrs. I. Phillips Frohman

Section on Medicine: "Angiocardiography," Dr. William L. Howell, and "Hyperparathyroidism," Dr. Paul Kiernan, both of the Washington Clinic; "Glutamic-Oxaloacetic Transaminase (GOT) in Myocardial Infarction," Drs. Bernard H. Ostrow, Daniel Steinberg, Howard E. Ticktin, and John M. Evans, George Washington University Hospital and National Heart Institute; "Oral Medication for the Treatment of Diabetes," Drs. Maurice Protas and William Kirstin; "The Use of Enzymes on Surface Lesions," Drs. Monroe J. Romansky, Charles D. Cooper, and Warren E. Wacker, George Washington University Hospital and School of Medicine

Section on Neurology: "Temporal Lobe Suppressor Seizures," Drs. Jorge Huertas, Francis M. Forster, and Desmond S. O'Doherty, Georgetown University Medical Center, and "Symptomatic Control of the Acutely Disturbed Patient with Promazine," Drs. John D. Schultz and Joseph F. Fazekas, D. C. General Hospital

Section on Obstetrics: "Incunabula: Obstetric Art," Dr. Samuel M. Dodek

Section on Ophthalmology and Otolaryngology: "The Newer Corticosteroids in Ophthalmology," Drs. John H. King, Jr. and Jack W. Passmore, Walter Reed Army Hospital and Washington Clinic

Section on Orthopedic and Traumatic Surgery: "Immediate Repair of Traumatic Injuries and Reconstruction of Congenital Anomalies," Dr. Alfred J. Suraci, Providence and Sibley Memorial Hospitals

Section on Physical Medicine and Rehabilitation: "Advances in Amputation Prostheses," Dr. Everett J. Gordon, Veterans Administration

Section on Proctology: "Extended Resection for Cancer of Distal Colon and Rectum," Drs. R. S. Smith, G. W. Ault, and A. F. Castro, Proctology Clinic of Washington

Section on Radiology: "Medical Applications of Radioisotopes," Dr. Adolph Friedman

Section on Surgery: "Fractures of the Distal Radial Shaft—Mistakes in Management," Dr. John P. Adams, Piedmont Orthopedic Society "Percutaneous Transthoracic Left Heart Catheterization," Drs. John M. Keshishian, Owen Gwathmey, George B. Kelser, and Brian Blades, George Washington University School of Medicine

Three physicians were represented in the Motion Pictures Section: Dr. Alfred J. Suraci, "Plastic Reconstruction of Agenesis of the Vagina"; Dr. Brian Blades, "Pectus Excavatum—Surgical Repair"; and Dr. W. Calhoun Stirling, "A Simplified Technic of Ureterosigmoidostomy."

S.M.A. called on a great number of Society members to discuss papers. Those who responded were:

Drs. John P. Adams, Garnet W. Ault, Robert H. Barter, Fred O. Coe, Robert J. Coffey, James A. Dusbabek, Henry L. Feffer, William H. Ferguson, Allen M. Ferry, Robert J. Fink, Francis M. Forster, C. K. Fraser, I. Phillips Frohman, John Gallagher, James Q. Gant, Jr., Marvin M. Gibson, Everett J. Gordon, Frank M. Hand, W. Proctor Harvey, William P. Herbst, Jr., Maurice H. Herzmark, Charles A. Hufnagel, Alfred E. Jackson, Gordon S. Letterman, Allen S. Lloyd, Joseph M. LoPresti, John T. Lord, George Maksim, Andrew A. Marchetti, Allan M. McKelvie, James M. Moss, Julius S. Neviaser, Paul J. O'Donnell, Leonard T. Peterson, John C. Ransmeier, Charles E. Rath, Austin B. Rohrbaugh, Jr., Sydney Ross, H. D. Shapiro, Donald Stubbs, William J. Tobin, J. Ross Veal, Bernard J. Walsh, George William Ware, John A. Washington, James W. Watts, R. Lomax Wells, Jonathan M. Williams, Thomas A. Wilson, Alvin C. Wyman, and Leon Yochelson.

On the Lighter Side

Christmas comes but once a year—but what a coming it is! The stores are all aglow with the tinsel, balls and holly; the toys and dolls crowded into the picture windows; the usual and the unusual all tied up with ribbons, bells and bows. The Christmas crowds of shoppers are shuffling and shoving through the streets and stores, and the exhilarating tingle of the Christmas spirit is felt in every fiber of one's being.

A jolly Christmas Santa is on every street corner merrily ringing his bell for alms. The familiar strains of the Christmas carols come floating through the chilled air from every radio and open window. The street salesman with his little mechanical toys dancing all over the pavement, and the hundreds of little noses that are pressed against a hundred show windows all remind us that it is Christmas.

Everyone has lists. And all the lists are scribbled and scratched with those last minute changes and additions. For after all—no one can be forgotten on Christmas!

Even the hospitals of the Greater Washington Area celebrate Christmas. Some have Christmas parties, others Christmas dances. Some hospitals take up collections from the medical staff to add a little enjoyment to the lives of their nurses and aides. Others give fringe benefits as a Christmas gift—but all the hospitals have the traditional Christmas tree decorated from tip to trunk, and the traditional Christmas dinner for the staff who are working on Christmas and for the patients who must lie abed on this Day of Days. And, if you happen to be in the corridors of the hospital you may hear the inspired singing of the Christmas carols, which ushers in the early morn of Christmas.

I have often wondered what our world would be like without Christmas. There would be less good will among men, less charity, less happiness, less joy of giving, less kindness, less faith, less hope, less forgiveness, and less love of our fellow man.

Who amongst us could live in such a world where faith, hope and charity were nonexistent? Or, how long could we exist without the Christmas blessings of the Prince of Peace?

The Season's Greetings to all and a happy and prosperous New Year to everyone from ON THE LIGHTER SIDE.

NOTES FROM THE MAILBAG: Dr. G. J. P. Barger, of 1125 Buchanan Street, N.W., writes that he would be interested to know if there are any members of the Medical Society who would join in a doctors group to indulge in a little square dancing, folk dancing, tap or/and ballroom dancing?

This group would include the doctors, the doctors' wives and their older children, and would be organized for regular and active participation.

Dr. Barger states that square dancing is very easy to master and it could lead to the learning of the other types of dancing.

This idea of Dr. Barger is good, and any physician who is interested in such a dancing program please phone Dr. Barger at Randolph 3-4464 and swing your pardner!

* * * * *

Dr. W. Montague Cobb sent in the following: Sailfish weighing 133 lbs. and measuring 9 feet 4 inches long was caught by Dr. Cobb on September 27, 1956 about 20 miles off the coast of Acapulco, Mexico. Dr. Cobb attended the first Pan American Congress on Gerontology during his stay in Mexico.

Dr. Cobb and His Sailfish

(*Continued on page 706*)

News and Personals

MEETINGS

The Clinical Meeting of the American Medical Association, held in Seattle, Washington, November 27 to 30, was attended by a small delegation of Washington doctors. The Society's official delegates, Drs. Raymond T. Holden and Victor R. Alfaro, were present for the meetings of the House of Delegates, as was the Society's Secretary, Theodore Wiprud.

Dr. Francis M. Forster, Dean of Georgetown University School of Medicine, attended as delegate from the AMA's Section on Nervous and Mental Diseases. He also participated in the scientific program. In a Panel on Epilepsy, he discussed "The Epileptic in Society." With Dr. Bushnell Smith, also of the Georgetown staff, he co-authored a paper on "The Newer Treatment of Epilepsy." These two physicians presented a motion picture on "Modern Concepts of Epilepsy."

Dr. Edward D. Freis participated in a Panel Discussion on Hypertension: Current Concepts of Management.

Several Washington doctors took part in the Scientific Exhibit. The exhibits and exhibitors were:

"Prednisolone Tertiary Butylacetate and Hexylcaine in Soft Tissues—Nonarticular Injection Technics," Dr. Eugene G. Lipow, George Washington University School of Medicine, and Dr. Richard T. Smith, Benjamin Franklin Clinic, Philadelphia; "Chronic Headache—an Analysis of 1,254 Cases," Drs. Lester S. Blumenthal and Marvin Fuchs, George Washington University Hospital; and "Symptomatic Control of the Acutely Disturbed Patient with Promazine," Drs. John D. Schultz, Jr., Joseph F. Fazekas, James G. Shea, and Paul D. Sullivan, District of Columbia General Hospital.

Staff members of Georgetown University School of Medicine presented a motion picture on "Pitfalls in Management of Refractory Heart Failure," the work of Drs. Harold J. Jeghers, W. Proctor Harvey and Jack P. Segal.

For the **Clinical Congress of the American College of Surgeons,** which convened in San Francisco, October 8–12, the District Medical Society contributed a generous number of speakers.

In the Section on Gynecology and Obstetrics, Dr. J. Bay Jacobs collaborated in a Panel Discussion on Indications and Technics in Induction of Labor. Dr. Robert H. Barter took part in a Panel Discussion on Perineal Trauma.

Dr. William T. Spence participated in a symposium before the Section on Neurologic Surgery. His paper was entitled, "Ten Years' Experience Using Form-fitting Plastic Cranioplasty 'Cranioplastic'."

Dr. Robert E. Moran collaborated in a Panel Discussion on Reconstructive Surgery of Eyelids and Orbital Region before the Section on Plastic Surgery.

Dr. Frank B. Berry, Assistant Secretary of Defense for Health and Medicine, spoke on "Effect of Military Demands on Training Programs" in a Symposium on Graduate Training in Surgery and the Surgical Specialties.

In a Ciné Panel on Surgery of the Stomach, Dr. Robert J. Coffey, surgeon and narrator, gave an illustrated lecture on "The Surgical Management of Calcific Pancreatitis."

Three Washington doctors took part in the postgraduate courses: "Methods for Reëstablishing Arterial Continuity in Occlusive Disease of the Arteries" and "Aortic Regurgitation," Dr. Charles A. Hufnagel (Cardiovascular Surgery); "Fractures and Dislocations of the Elbow," Dr. Leonard T. Peterson (Fractures and Dislocations); and "Surgical Complications of Pregnancy," Dr. Robert H. Barter (Gynecology and Obstetrics).

In a Forum on Fundamental Surgical Problems, Drs. W. A. Spencer, J. R. Thistlethwaite, and S. N. Albert, of the Departments of Anesthesiology and Surgery, D. C. General and George Washington University Hospitals, contributed two papers to the section on general surgery: "A Simplified Method for Blood Volume Determinations Using Radioactive

Isotopes" and "Blood Volume Fluctuations Determined by CR^{51} and RISA." In the latter paper, Dr. Thistlethwaite was the senior author and Drs. Spencer and Albert, co-authors. In the Forum section devoted to gynecology and obstetrics, Drs. Robert H. Barter, John L. Parks, James A. Dusbabek and Lt. Colonel A. L. Riva, Department of Obstetrics and Gynecology, George Washington University School of Medicine, contributed a paper on "Closure of the Incompetent Cervix During Pregnancy—Preliminary Report on the Use of Fascia Lata."

At the close of the meeting, approximately 1,000 surgeons were inducted into fellowship in the College. Among them were Drs. Hartford R. Burwell and John J. Nolan, Active members of the District Medical Society, and Dr. S. Jack Sugar, an Affiliate member of the Society.

An increasing number of members of the Medical Society of the District of Columbia are participating in the activities of the **American Academy of Ophthalmology and Otolaryngology,** especially the annual convention, the most recent of which was held in October.

Several years ago the Academy began recognizing by an Honor Award those who had contributed materially to the program for the past number of years. This year Drs. Frank D. Costenbader and G. Victor Simpson were so honored.

The customary papers, discussion, and motion pictures have always formed an important part of every Academy program. This year these included the following which originated from Washington:

"Newer Teaching Aids in Otology" (movie), Dr. Irving Hantman

Symposium on Accommodative Esotropia: "Treatment," Dr. Costenbader

"Production of Heterochromia and Glaucoma by Diffuse Malignant Melanoma of the Iris," Drs. Benjamin Rones and Lorenz E. Zimmerman

A prominent part of the Academy's program is the instruction courses made available to its members at each annual meeting. The following courses were presented by Washington physicians:

12-hour course on "Comitant Strabismus," Dr. Costenbader, assisted by Drs. Marshall M. Parks and Dan G. Albert.

2-hour course on "Diagnostic and Therapeutic Office Procedures," Dr. M. Noel Stow, who also participated in an 8-hour course on "Ophthalmic Plastic Surgery."

12-hour course on "Ophthalmic Pathology," with Dr. Zimmerman as a participant.

Two 1-hour courses on "Convergence Insufficiency and Divergence Excess, and Probing the Naso-lacrymal Duct," Dr. Simpson.

Two 1-hour courses on "Office Design and Equipment," Dr. Victor R. Alfaro.

Two 1-hour courses on "Aids in Teaching Otolaryngology," Dr. Irving Hantman.

During the Academy meeting, 27 members of the attending staff and ex-residents of Episcopal Eye, Ear and Throat Hospital gathered for an enjoyable dinner at the LaSalle Hotel. The President of the organization is Dr. Everett S. Caldemeyer and the Secretary-Treasurer is Dr. Albert.

Dr. Alfaro serves on the Academy's Committee on Pan American Relations in Otolaryngology, and Dr. Costenbader is one of 3 representatives on the American Orthoptic Council.

The 63rd Annual Convention of the Association of Military Surgeons of the United States was held at the Hotel Statler in Washington, November 12–14. The theme of the meeting was "The Expanding Horizons of Military Medicine."

At the opening session, November 12, Rear Admiral Winfred P. Dana, MC, USN, President of the Association, presided and gave the President's Address. Other speakers at the morning session included Major General Silas B. Hays, Surgeon General of the Army, who spoke on "Medicare Law," and Major General Dan C. Ogle, Surgeon General of the Air Force. General Ogle's address was entitled "Expanding Horizons of Aviation Medicine." Both Generals Hays and Ogle are Honorary members of the D. C. Medical Society.

The Founder's Medal, given for outstanding contribution to military medicine and meritorious service to the Association, was presented to three officers; one of them was Major General George E. Armstrong (ret.), former Surgeon General of the Army and now Director of New York University-Bellevue Medical Center, also an Honorary member of the District Medical Society.

Dr. Roy Hertz, Chief of the Endocrinology Branch of the National Cancer Institute, presented a paper on "Chemotherapeutic Study of Hormone-producing Tumors of Adrenal and Trophoblastic Origin." Dr. A. B. C. Knudson, Director of Physical

Medicine and Rehabilitation, VA Central Office, presented a scientific exhibit on "Rehabilitation Follow-up—Medical Responsibility in Training the Whole Man." Dr. Hertz is an Active, and Dr. Knudson, an Associate member of the D. C. Medical Society. Two other members of the Society participated in the scientific program, both of them as presiding officers: Brig. General Stanhope Bayne-Jones (ret.), formerly Technical Director of Research of the Office of the Surgeon General of the Army, and Dr. William S. Middleton, Chief Medical Director of the Veterans Administration.

The American Association of Medical Clinics held its Seventh Annual Session at the Mayflower Hotel in Washington, October 26-28. Among the speakers were Dr. Edward J. Stieglitz, who took part in a discussion on "How Can Group Practice Give Better and More Economical Service to the Chronically Ill and Aged?" Theodore Wiprud, Secretary of the Medical Society, participated in a Panel Discussion on Methods of Lowering Malpractice and Liability Incidents and Insurance Rates.

Mr. H. S. Brumfield, Business Administrator of the Yater Clinic, assisted in a workshop discussion on "What Items of Professional Expense Are Included in Clinic Overhead and How Are Such Expenses Controlled?"

The District of Columbia Division of the American Cancer Society held its Tenth Anniversary Luncheon and business meeting, October 23, at the Shoreham Hotel. The principal speaker was Mr. Mefford R. Runyon, Executive Vice President of the American Cancer Society. Dr. Calvin T. Klopp, President of the District Division, and one of the original incorporators of the Division in 1946, gave an interesting narration on the origin of the Washington branch and enumerated some of the milestones which have marked its 10 years of progress in the cancer program.

Mark Evans, WTOP radio and TV commentator, was master of ceremonies. A number of the original incorporators were present and received an enthusiastic ovation from the luncheon guests. Among them were Dr. Harry Kerr, the first President of the Division, Dr. Roger M. Choisser, Dr. William P. Herbst, Jr., and others.

Preceding the luncheon, special programs were held for volunteers, social workers, and nurses. The volunteers heard Dr. Grace Guin, Associate Pathologist at Children's Hospital, speak on "Cancer in Children" and Dr. Ernest A. Gould, surgeon, discuss "The Cancer Problem Today."

Dr. Maurice van Kinsbergen and Dr. Cyril A. Schulman, Director of the Home Care Program, George Washington University Cancer Clinic, in a panel presentation on "The Community Medical Team in the Treatment of Cancer," addressed the social workers.

Nurses heard some of the latest "Developments in the Use of Chemotherapy in the Treatment of Breast and Uterine Cancer" from Dr. Jeanne C. Bateman, of Garfield Hospital.

At the business session following the luncheon, Dr. Klopp was reëlected President of the Branch. Drs. Herbst and C. Roger Kurtz were elected to the Executive Committee.

Dr. George T. Pack, Associate Professor of Surgery, Cornell University Medical College, addressed the D. C. Division at a meeting in the Medical Society's auditorium, October 22. He spoke on "The Philosophy of Cancer Therapy." This meeting was held as a part of the Tenth Anniversary Meeting.

The Washington Homeopathic Medical Society met at the Kenwood Country Club, October 30. Dr. John Murgolo presented a paper on "Diagnosis and Treatment of Deafness for the General Practitioner," following which Dr. Edgar E. Quayle described his recent trip to Europe. In a short business session, the Society reëlected the same officers for 1957.

At this meeting, the **Hahnemann Alumni Association of the National Capital Area** was organized, with the hope of enlisting in its membership all graduates of the Hahnemann Medical College who are practicing in this area. The following officers were installed:

Dr. Wyrth P. Baker, *President*; Dr. William P. Chalfant, *Vice President*; and Dr. Horace H. Custis, Jr., *Secretary-Treasurer*.

The Section on Ophthalmology held a dinner meeting at the Kennedy-Warren, October 30. The guest speaker was Dr. George N. Wise, Jr., of New York City. He spoke on "Macular Changes Following Venous Obstruction."

The District of Columbia Chapter of the American Academy of General Practice met, October 31, in the Library of the Medical Society. Dr. Oscar B. Hunter, Jr., delivered a paper on "The Use of Radioactive Isotopes in Diagnosis."

The Jacobi Society held its regular dinner meeting at the Willard Hotel, November 19. Mr. Mike Gorman, Executive Director of the National Mental Health Committee, addressed the group on "Psychiatry, Fable or Reality?"

The Northern Virginia Academy of Surgery held its annual election of officers at a meeting at the Army-Navy Country Club, October 2. The following officers were elected to serve during 1956–57:

Dr. John Alexander, *President*; Dr. W. Leonard Weyl, *Vice President*; Dr. Michael Puzak, *Secretary*; and Dr. Allen Ferry, *Treasurer*.

Elected to the Council were Drs. Robert O'Donnell, Gerard Inguagiato and Alfred E. Jackson.

Drs. Weyl, Inguagiato, and Jackson are Associate members, and Dr. Ferry, an Affiliate member, of the D. C. Medical Society.

The 12th Annual One-day Conference of the Metropolitan Washington Tuberculosis Conference, held November 8, was attended by more than 300 persons interested in the field of tuberculosis. Dr. Moe Weiss, Chief of Medical Services at Glenn Dale Hospital, was elected President of the Conference, succeeding Dr. Sol Katz. Among the speakers were Dr. Donald Sickler, Chief of the TB Control Division of the District Health Department, and Dr. Daniel L. Finucane, Superintendent and Medical Director of Glenn Dale.

The Washington Psychiatric Society met in the Medical Society's Building, October 26. Following a presentation of the topic, "Interrelationship of Law and Psychiatry" by Mr. Abe Fortas, Washington attorney, Dr. John R. Cavanagh led discussion of the subject.

The Upjohn Company presented the third in its series of Grand Rounds of live, closed-circuit telecasts, October 17, in the Medical Society's building, to a capacity audience. This program, entitled "The Borderlines of Cancer," originated in the amphitheaters, wards and operating rooms of the Tufts University Hospital and the New England Medical Center in Boston.

Pfizer Laboratories sponsored a closed-circuit pre-election telecast program for doctors, October 24, entitled, "Election 1956." The program originated at the Shoreham Hotel and was televised to physicians in a number of other cities. Mr. Lawrence E. Spivak, of "Meet the Press," was moderator. Mr. Leonard W. Hall, Chairman of the Republican National Committee, and Mr. Paul M. Butler, Chairman of the Democratic National Committee, were interviewed by four well-known news commentators, Marquis Childs, of the *St. Louis Post-Dispatch*; May Craig, of the *Portland* (Maine) *Press Herald*; Richard Wilson, of Cowles Publications; and Ned Brooks, of NBC.

GENERAL NEWS

The Executive Board of the Medical Society of the District of Columbia held its regular meeting, October 22, 1956. At that time, it was voted that the Society members should be polled to determine the interest of each individual member in participating in a Blue Shield group policy through the Medical Society.

Dr. Ralph M. Caulk, President, and Theodore Wiprud, Secretary, were authorized to sign for the Society the proposed contract with the United States Government which is being prepared by the Office for Dependents' Medical Care. Negotiations were scheduled for 8:30 a.m., November 14, in the offices of the Surgeon General of the Army, in the Main Navy Building.

Based on the experience of the spring course, the Committee on Emergency Medical Service of the Washington Metropolitan Area recommended that the program be condensed to 3 evenings instead of 5 and that the follow-up Course in Disaster Medicine for physicians, dentists and nurses be held in the Society's auditorium on January 15, 16 and 17.

President Caulk was authorized to invite the Woman's Auxiliary to appoint one member to serve in an ex officio capacity on each of the following committees of the Society: Public Policy, Public Information, Public Health, Subcommittee on Child Welfare, and House.

Mr. Robert P. Locey, President of the Georgetown University Chapter of the Student American Medical Association, requested that the Medical Society appoint a representative to act as an executive director of the organization along with 2 such representatives from the Georgetown University School of Medicine. Dr. Raymond T. Holden was designated to fill that role in the Georgetown Chapter.

At the request of Dr. James M. Moss, President of the Diabetes Association of the District of Columbia and Chairman of the 1956 Diabetes Detection Drive, the Society gave its official endorsement to the Drive.

The following committee appointments were confirmed by the Board:

Dr. Josephine J. Buchanan, to the Committee on Public Health.

Dr. Theodore Winship, to the Committee on Professional Liability Insurance, succeeding Dr. John M. Orem, whose term expires in 1957.

Dr. James H. Nelson and Dr. William F. Peterson, Associate members of the Obstetrical Board.

Dr. Alfred E. Brigulio, General Chairman of the Committee on Arrangements for the 1957 Annual Scientific Assembly.

The Society's Committee on Coöperation with the D.C. Bar Association reported that Drs. Raymond A. Osbourn and Everett J. Gordon had been appointed to a subcommittee which will prepare a manual for the guidance of lawyers and physicians, containing rules of conduct for members of both professions. The D. C. Bar Association is of the opinion that such a manual, if adopted by both the Bar Association and the Medical Society, would be extremely helpful to young lawyers and physicians in reminding them of the courtesies they should render to one another.

The Secretary reported that the first of a series of luncheon round tables sponsored by the Committee on Professional Liability Insurance was held in the Society's building on October 9 and was very well received. Dr. Robert E. Moran, Chairman of the Committee on Professional Liability Insurance, discussed various phases of malpractice.

Major General Paul I. Robinson has been appointed Executive Director for the new **Dependents' Civilian Medical Care Program.** General Robinson comes to the Army Surgeon General's Office from Letterman Army Hospital, San Francisco, where he has been commanding officer since late in June, 1955. He has commanded three of the Army's largest hospitals, including the Letterman command. The others were the Madigan Army Hospital, in Tacoma, Washington, and the Fitzsimons Army Hospital, in Denver.

The Public Health Service is establishing a **Center for Aging Research** in the National Institutes of Health. **Dr. G. Halsey Hunt,** Director of the Center, assumed his new duties on November 19.

Dr. Eliot

Dr. Martha M. Eliot, Chief of Children's Bureau, is retiring at the end of this month, having been affiliated with the Children's Bureau for 30 years and as Chief since July, 1951. For two years she was on leave of absence as Assistant Director of the World Health Organization. Dr. Eliot will become Professor of Maternal and Child Health at Harvard University.

Mr. Victor Ludewig, Administrator of George Washington University Hospital, was elected President-elect of the **Maryland-D.C.-Delaware Hospital Association** during its meeting in Washington early in November. Dr. Warwick T. Brown, Administrator of Emergency Hospital, was made a Vice President, and Mr. Richard M. Loughery, Administrator of Garfield Hospital, was one of the new members named to the Board of Trustees.

In ceremonies, October 13, **Suburban Hospital** dedicated its new, five-story wing, as part of a three-step building program. The wing was completed at a cost of $1.5 million and will add 75 beds to the 125 already in service.

Dr. Leroy E. Burney, Surgeon General of the Public Health Service, announced the reassignment of four key medical officers, October 18.

Dr. Jack Masur, Chief of the Bureau of Medical Services since 1951, is now Director of the Clinical

Center of the National Institutes of Health. Dr. Masur, who supervised the planning and building of the Center, succeeded Dr. D. W. Patrick, November 1. Dr. Patrick has been appointed Medical Officer in charge of the PHS Hospital in San Francisco, California.

Dr. John W. Cronin is now Chief of the Bureau of Medical Services which administers the PHS hospitals, the Hospital and Medical Facilities Survey and Construction Program, the Indian Health Program, the Foreign Quarantine Program, and the Dental and Nursing resources activities. Dr. Cronin has been Chief of the Hospital and Medical Survey and Construction Program. He is an Associate member of the District Medical Society.

Dr. Vane M. Hoge succeeds Dr. Cronin as Chief of the Hospital and Medical Survey and Construction Program.

PERSONALS

Dr. A. B. C. Knudson, Director of the Physical Medicine and Rehabilitation Service of the Veterans Administration, assumed the duties of President of the American Congress of Physical Medicine and Rehabilitation at its meeting in Atlantic City.

Dr. Knudson is an Associate member of the District Medical Society, a Fellow of the American College of Physicians, a member of the American Medical Association, American Academy of Physical Medicine and Rehabilitation, Industrial Medical Association, and many other scientific associations.

Dr. Knudson, with **Dr. Frederick J. Balsam,** also an Associate member of the D. C. Medical Society, and Mr. Joseph H. Van Schoick, presented an exhibit at the meeting of the Congress on "Rehabilitation Follow-up—a Medical Responsibility in Treating the Whole Man." Dr. Balsam is Chief of the Program Development under Dr. Knudson, and Mr. Van Schoick is his Special Assistant.

Dr. Robert E. Moran was in Coral Gables, Florida, October 18–20, where he served as a member of the Examining Board of the American Board of Plastic Surgery. Of 17 examined, 16 were passed by the Board. From there Dr. Moran went to Miami Beach to attend the annual meeting of the American Society of Reconstructive Surgery, October 21–26. Sir Archibald Mc Indoe, a distinguished plastic surgeon on the staff of Queen Victoria Hospital in Sussex, England, was invited to address the Society. He, in turn, invited Dr. Moran to present his work on exophthalmos before the British Society in July, 1957. While on the Continent, Dr. Moran will also speak on the same subject in Sweden, Germany and Portugal.

During the Florida meeting, Dr. Moran took the initiative in forming a subsociety of the alumni of Mayo Clinic, which will be known as the Ex-plastic Surgery Fellows of the Mayo Foundation. Dr. Moran was elected President of the new society, which has a charter membership of 32.

Dr. Harry Clark Bates, Jr., former President of the Arlington County Medical Society, was named President-elect of the Medical Society of Virginia at its annual meeting in Roanoke, October 14–17. Dr. Bates is an Associate member of the District Medical Society.

Drs. J. Winthrop Peabody, Sr., Charles A. Hufnagel, and Frank A. Finnerty, Jr., all staff members of Georgetown University School of Medicine, participated in the Ninth Annual Postgraduate Course of the American College of Chest Physicians at the Park Sheraton Hotel in New York City, November 12–16. Dr. Peabody, who is Chairman of the Council on Postgraduate Medical Education, was moderator at the morning session, November 12. Dr. Hufnagel spoke on "Surgical Management of Lesions of the Aortic Valve" in a Panel Discussion on Surgery of the Heart. Dr. Finnerty participated in a Luncheon Round Table: Varieties of Hypertension and Their Management.

Dr. Howard T. Karsner, Medical Research Advisor to the Surgeon General of the Navy, will be the first Carl V. Weller Lecturer at Ann Arbor, Michigan, December 8. The Carl V. Weller Lectureship has been established by the Michigan Pathological Society in recognition of Dr. Weller's many contributions to medical science in the fields of pathology and clinical pathology.

Dr. Karsner, who is an Associate member of the

D. C. Medical Society, was recently elected a member of the New York Academy of Sciences.

Dr. John L. Parks, Professor of Obstetrics and Gynecology, George Washington University School of Medicine, was elected Vice President of the American College of Obstetricians and Gynecologists at its Fifth Annual Meeting held in Chicago, November 7–9.

An oil portrait of **Dr. Edgar P. Copeland,** Chief of Staff Emeritus of Children's Hospital, was presented by 357 members of the medical staff to the Hospital in ceremonies, November 7.

Dr. Copeland has been on the medical staff of Children's since 1899, having finished his education there in 1898. Since resigning as Chief of Staff of the Hospital in July, 1955, he has served the Hospital in an advisory capacity. The portrait, which was painted by Bjorn Egeli, will hang in the Hospital's auditorium next to a portrait of Dr. Copeland's good friend, the late Dr. Joseph S. Wall, head of the medical staff for may years.

At a recent ceremony in New York City, His Excellency Jacques Leger, Ambassador of Haiti to the United Nations, presented the medal of Officer of the Haitian Order *Honneur et Merite* to **Dr. Winfred Overholser,** Superintendent, and to Dr. Leon Konchegul, staff member, St. Elizabeths Hospital.

The Ambassador stated that St. Elizabeths Hospital, one of the world's outstanding mental institutions, has always been very helpful to the World Health Organization. It has been generous in making its facilities available for postgraduate training of psychiatrists sent to the United States through WHO.

Dr. Daniel F. Lynch, Past President of the American Dental Association and Associate member of the D. C. Medical Society, received the Annual Achievement Award from the American Dental Society of Anesthesiology at the Society's recent annual meeting in Atlantic City.

Dr. Henry H. Lichtenberg, Medical Director of Group Health Association, Washington, was elected Third Vice President of the Coöperative Health Federation of America at its Tenth Anniversary Session in Philadelphia, August 22–24.

Dr. Eloise Blaine Cram, who has been on the staff of the Public Health Service for more than 35 years, was honored by her colleagues at a dinner, October 24, pending her retirement from the Institutes of Health at the end of October.

Dr. Cram has been associated for many years with the Laboratory of Tropical Diseases of the National Institute of Allergy and Infectious Diseases. She is a graduate of the University of Chicago, and received her doctorate in philosophy from George Washington University. She is the author of numerous articles in her field and is a specialist on infections caused by worm parasites. She recently served as President of the American Society of Parasitologists and is a member of several other scientific organizations.

Dr. Cram has submitted her resignation as Associate member of the Medical Society because she plans to be out of the city most of the time following her retirement.

Dr. Lawrence E. Putnam has resigned as Associate Medical Director of the Antibiotics Division of the Food and Drug Administration. He will continue his private practice of internal medicine.

On October 25, Dr. Putnam addressed a luncheon meeting of the medical staff of the Leland Memorial Hospital in Riverdale, Maryland. The subject of his address was "Reactions to Penicillin and Other Antibiotics."

Drs. Addison M. Duval and C. Herbert Marshall have been reappointed to the District Commissioners' Youth Council.

Dr. Hugh H. Hussey, Professor and Director of the Department of Medicine, Georgetown University School of Medicine, was guest speaker at the Third Annual Clinic Day at St. Mary's Hospital, Rochester, New York, October 25. Dr. Hussey was also clinical discussor at a Clinico-Pathological Conference and participated in a Conference on Peripheral Vascular Disease.

Dr. John M. Evans, Associate Professor of Medicine, George Washington University School of Medicine, addressed the private duty section of the Virginia State Nurses Association, November 7. The meeting was held in connection with the Interstate Nursing Convention, November 5–10, at the

Hotel Statler. Members of the Graduate Nurses Association, the League for Nursing, and the Student Nurses' Association of the District of Columbia, Delaware and Virginia were in attendance at the 6-day meeting.

Dr. Charles S. Coakley, Professor of Anesthesiology, **and Dr. Seymour Alpert,** Associate Professor of Anesthesiology, George Washington University School of Medicine, were among the civilian lecturers who addressed some 50 army nurses who gathered at Walter Reed Army Medical Center, November 12–17, for the first National Postgraduate Workshop in Anesthesiology.

Dr. Joseph W. Still, Professor of Physiology, George Washington University School of Medicine, attended the Ninth Annual Meeting of the U. S. Gerontological Society in Chicago, November 8–10, and on the last day read a paper before the Biology Section on "Comparison of Blood Viscosity Changes in Old and Young Rats."

Dr. Pincock

In September Dr. Still presented a paper before the Pan American Gerontological Congress in Mexico City; it was entitled "Cybernetic Theory of Aging."

Dr. Carolyn S. Pincock was named Medical Woman of the Year by the Women's Medical Society (Branch One

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
October 15	Dr. Calvin B. LeCompte	Problems Causing Juvenile Delinquency	Edgewood Civic Association
October 16	Dr. Julius Schreiber	Emotional Needs of Children	Meridian Hill Coöperative Nursery School
October 18	Dr. Edward J. Stieglitz	Moderator for Panel Discussion on Geriatrics	District of Columbia Village
October 28	Dr. Addison M. Duval Dr. Preston A. McLendon	Participants in Panel Discussion on Juvenile Delinquency	WRC-TV Program, District Dilemma
November 7	Dr. Dorothy V. Whipple	Teen-age Dating	WTOP-TV, Donna Douglas Program
November 13	Dr. William P. Argy	Cerebral Palsy	Practical Nurses Association of D. C.
November 13	Dr. Julius Schreiber	The Psychology of Dating	B'nai B'rith Hillel Foundation
November 14	Dr. Edith H. Weigert	Problems of the Later Years	WTOP-TV Donna Douglas Program
November 21	Dr. Edna G. Dyar	Premarital Counseling	WTOP-TV, Donna Douglas Program
December 12	Dr. Carolyn S. Pincock	The Effect of New Arrivals on Intermarital Relationships	WTOP-TV, Donna Douglas Program

of the American Medical Women's Association) at the Annual Medical Women of the Year Luncheon in Boston, November 11. The luncheon was held on the last day of the national Association's annual meeting.

Captain George N. Raines, MC, USN, represented the Bureau of Medicine and Surgery at the academic dedication of the University of Mississippi Medical Center, held in Jackson, Mississippi, October 23–24. The dedication marked the inauguration of the establishment of a four-year school of medicine at the University. Dr. Raines presented a paper at the scientific assembly, entitled "Psychiatry and Undergraduate Medical Education."

Dr. Edward J. Stieglitz attended the meeting of the Gerontological Society, Inc., in Chicago, November 8–11. He was Chairman of the Program Committee and moderator of a Panel Discussion on Education for Maturity.

On November 26 he attended the Governors' Conference on Aging in Minneapolis and gave a talk on "The Challenge of Longevity."

Dr. William P. Argy, Medical Director of the District of Columbia Society for Crippled Children, was one of the speakers at the Annual Convention of the National Society for Crippled Children and Adults, held at the Hotel Statler, October 28–31.

Dr. Henry A. Monat gave an address on "Ulcerative Colitis" at the Annual Meeting of the American College of Gastroenterology in New York, October 16.

BOOK REVIEWS

Epilepsy and the Law. A Proposal for Legal Reform in the Light of Medical Progress. Roscoe L. Barrow, Dean, University of Cincinnati College of Law; Legal Adviser, Special Committee on Legislation, American League Against Epilepsy, and Howard D. Fabing, M.D., Past-President, American Academy of Neurology; Chairman, Legislation Committee, American League Against Epilepsy. Price, $5.50. Pp. 177. New York: Hoeber, 1956.

Startling facts are brought out in this study of the laws (often antiquated) of the various states pertaining to epileptics. Marriage licenses, sterilization, driving licenses, Workmen's Compensation, and miscellaneous laws are reviewed in turn and are found to be based on an outmoded concept of epilepsy. Sadly enough, although 50 per cent of the epileptics can expect complete control of their seizures and an additional 25 per cent will have partial but almost complete control of their seizures by means of modern medical therapy, these people may be penalized as fully as if there were no control of the seizures. The authors point out that many laws, although present on the statute books, are not enforced today. This often depends on the interpretation by nonmedical administrators. For example, in 17 states the epileptic commits a crime by marrying. In 16 states he can never drive an automobile legally no matter how many years he may have been seizure-free. The etiology of his seizures makes no difference when it comes to sterilization in 4 states, where it is still commonly done today; in 14 other states it is possible, although the law is no longer enforced. Workmen's Compensation laws often make the employment of the epileptic impractical since he is not eligible under the second injury clause applicable to physically handicapped people. Many employers feel the epileptic is more prone to injury than the average worker and they do not wish to risk a suit for total disability as a result of an employee's seizure.

Throughout this book, the authors note fact after fact to demonstrate the discriminating legislation existing today that often hampers the rehabilitation of the epileptic since he will go underground rather than reveal his disease to a physician who would treat it. The great value of this book does not lie in the detailed references to legal documents that are cited in the text but in the recommendations that are clearly and simply stated. There can be no better example than a law that is effective in accomplishing the task for which it was designed. In the appendices there are printed laws which, in the opinion of the authors, fulfill the need for which they were intended. Additional samples are present for models for future legislation which the authors hope will come to exist. The book is a blueprint for the legal rehabilitation of the epileptic so that his medical rehabilitation will not be in vain.

This well-written book should be read by all physicians who have ever had to cope with the problems of the epileptic. I further recommend that it be passed on to the legislators and administrators so that they may have the advantages of the legal and medical opinions presented in this book.

Bushnell Smith, M.D.

A Dictionary of Dietetics. Rhoda Ellis, Ph.D., Instructor of Foods and Nutrition, Department of Home Economics, Brooklyn College, New York. Pp. 152. New York: Philos. Libr., 1956.

As the title implies, this book is a compilation of detailed definitions of a wide variety of substances and subjects related to the general field of nutrition.

The extensiveness of some of the definitions contained in this volume is well exemplified, for instance, in the treatise on "Food Habits." Herein are listed the characteristic foods eaten by a variety of peoples, such as Armenian, Turkish, Czechoslovakian, French-Canadian, Hungarian, Irish, Jewish, Portuguese, etc., with details as to sources of calories, likely deficiencies, strong points in the diet, and, finally, recommendations as to how these individual diets might be improved.

This small edition of 152 pages should be a helpful addition to the library of the professional and layman alike who are interested in nutrition.

W. K. Billingsley, Jr., M.D.

Observations on Krebiozen in the Management of Cancer. A. C. Ivy, Ph.D., M.D., Distinguished Professor of Physiology and Head of the Department of Clinical Science, University of Illinois, and formerly Executive Director of the National Advisory Cancer Council and Director-at-large of the American Cancer Society; John F. Pick, S.B., M.M., M.D., Head of Department of Plastic Surgery, Columbus Hospital, Chicago, and formerly Assistant Clinical Professor of Surgery, Universit, of Illinois; and W. F. P. Phillips, M.D., Department of General Practice, St. Francis Hospital, Evanston, Illinois. Price, $2.50. Pp. 88, and 9 tables and 5 illustrations. Chicago: Henry Regnery Company, 1956.

Krebiozen may some day be proven of worth in the treatment of malignant tumors. New theories and methods of attack on disease must be recognized by the physician for advancement of medical progress. But before such methods and theories are accepted, they must pass strict testing by controlled scientific investigation.

Like most human beings, we hoped in reading this volume to obtain some new sound knowledge in the therapy of cancer. The book has proved disappointing, and even hinders Krebiozen's claim for recognition. In short, the book explains that Krebiozen is an extract of horse serum obtained after the horse had received injections of cultures of *Actinomyces bovis*. *Actinomyces bovis*, which stimulates "lumpy jaw" tumors in cattle, is supposed to stimulate a natural-occurring substance in the reticuloendothelial system of the horse. This substance, Krebiozen, is believed to have anti-tumor properties.

The theory may be held by the authors until disproved, but their evidence for proof seems weak for general acceptance.

The results of laboratory and clinical investigations are the most disappointing to the reader. In a day of controlled scientific studies, they can hardly be accepted. There are too many variables concerned with each case and too few cases.

In summary, the professional man will find the book poor reading, and it could be most misleading in the hands of the lay person.

Joseph F. Schanno, M.D.

Physical Diagnosis, 5th edition. Ralph H. Major, M.D., Professor of Medicine and of the History of Medicine, The University of Kansas, and Mahlon H. Delp, M.D., Professor of Medicine, The University of Kansas. Price, $7.00. Pp. 358, with 536 illustrations. Philadelphia: Saunders, 1956.

The new edition of Major's "Physical Diagnosis" has a new junior author who has apparently made a definite effort to bring a fresh outlook to this standard text. New pictures have been added showing a physician in modern garb examining a young male patient. Several roentgenograms have been added which are very helpful. The rearrangement of the chapter on history-taking to appear early in the book rather than at the end and the inclusion of an outline for physical examination are improvements. The pictures of the models of lungs showing the lobes and segments are excellent. The pictures of the vaginal examination, both digital and by speculum, are most welcome in the new edition.

Nine years ago, when this reviewer began to teach a course on physical diagnosis, he read Major's third edition one weekend and found it to be the most readable of all the textbooks on this subject. After a few years of attempting to teach from this book and becoming plagued with the arguments of bright medical students, he sent a long letter to the publisher pointing out scores of errors which could be corrected. In 1951 the fourth edition appeared and there seemed to be great improvement.

Now the fifth edition appears with the help of an author who, according to the preface, "has become familiar with *almost every line* of this text." This reviewer in the past 4 weeks has read *every line* of the text and has found, among other things, the following defects:

1. There are an excessive number of references to typhoid fever—a disease which is rapidly disappearing in this country. Patients with this disease have not been available for demonstration during the past 9 years.

2. On page 19 there is reference to a grade III retinal

sclerosis with silver wire arteries and arteriovenous nicking but no exudate. According to the classification of eyegrounds originating at the Mayo Clinic, this would be a grade II retinopathy.

3. On page 31 there appears a statement, "Many cases of tuberculosis of the chest are missed because the physician did not insist upon the patient's removing his undershirt." This statement is probably not true today. The missed cases now are undoubtedly due to failure to take X-rays.

4. On page 37 the definition of scanning speech is not clear. A better definition can be found in Dorland's Medical Dictionary.

5. On page 45 the oral temperature of 98.6° is compared with a rectal temperature of 99.0°. Most authors state that the rectal temperature is 1° higher than the oral.

6. On page 67 Horner's syndrome is said to follow a lesion of the medullary tegmentum. The statement is true, but as it is written, medical students are led to believe that Horner's syndrome must be due to a lesion in this region. The syndrome, of course, can occur when the lesion is peripheral, such as when it involves the cervical sympathetic nerves.

7. On page 71 there appears a statement that a watch is heard normally perhaps 40 to 50 inches from the ear. On page 315 this figure is 30 to 40 inches from the ear. While these statements do not agree, they are essentially true for my father's watch which was manufactured in 1917. The ticks of most fine watches made today are much softer and can be heard only about 6 to 10 inches from the ear.

8. On page 85 the paragraph referring to the venous pulse waves is not clear and perhaps inadequate. On page 205 the explanation is clear and apparently correct, but on page 208 the V wave is incorrectly described as that of ventricular contraction. These discrepancies could be ironed out.

9. On page 92 the author rightly claims that the location of the nipple is variable and that the mid-clavicular line is more constant. However, on several subsequent pages (157, 165 and 226) he uses the term mammillary line instead of mid-clavicular line.

10. On page 93 appears the statement, "In tuberculosis we often find the skin of the chest oily and of coarse texture with the pores apparently further apart than in normal skin, but this is not pathognomonic, and also is frequently absent. In this disease the skin of the chest is often atrophied." This entire reference adds so little to the diagnosis of tuberculosis that it could easily be omitted.

11. On page 95 reference to figure 252 should be figure 251.

12. On page 131 the meaning of figure 241 is not clear.

13. On page 134 the classification of moist rales appears to be unnecessarily cumbersome. A simple classification of fine, medium, and coarse for moist rales has always appeared to be adequate.

14. On pages 147 and 221 the word "tubercular" is repeatedly used erroneously for "tuberculous."

15. On page 175 appears the clause, "the contraction of the strain becomes audible." The meaning of this is not clear unless the word "strain" is replaced by "auricles" or "atria."

16. On page 193 the statement, "Diastolic murmurs are more often organic than functional," is perhaps an understatement. Most teachers would state perhaps "diastolic murmurs are organic unless proven otherwise."

17. On page 207 reference to auricular fibrillation and "asytole of the auricles" should perhaps be modified in view of the work of Prinzmetal.

18. On page 214 a statement in italics stresses that the diastolic blood pressure is not the point at which the sounds disappear. This is contrary to the recommendations for Human Blood Pressure Determinations by Sphygmomanometers which was approved by the American Heart Association in 1951.

19. On page 219 Major repeats the mistake made by Harvey Cushing, that the syndrome named for the latter was associated with basophilic adenomata of the pituitary gland. It is now known that this syndrome is most often associated with hyperplasia or tumors of the adrenal gland and occasionally with ovarian tumors, as well as with the pituitary adenomata.

20. On page 199 rhythm and rate are carefully defined, yet on page 220 there appears the phrase "cardiac irregularities of rate." This is a common error but it is inexcusable.

21. On page 222 the tracing labeled as figure 349 is more easily read if turned upside down.

22. On page 225 the statement that influenza produces endocarditis with a resultant valvular lesion must certainly be questioned.

23. On page 229 reference to figure 310 for the pulse tracing in aortic stenosis should be either figure 321 or figure 324. Actually, figure 310 is a picture of a patient with tetralogy of Fallot. This error has been compounded from the third and fourth editions, and should not continue.

24. On page 264 the phrase "intestinal contents" is probably meant to be "abdominal contents."

25. On page 265 the word "diverticuli" should be "diverticula," for those physicians who have studied Latin.

26. On page 279 reference to figure 432 for condylomata should be figure 435, since figure 432 is actually a picture of a chancre in the female in which the legend advises that the chancre is not obvious. There are a few other pictures in the book in which the lesion is also not obvious.

27. On page 279 appears the statement, "the prostate and seminal vesicles are readily palpated with the patient in the standing position." This is somewhat doubtful since even in the crouched position the seminal vesicles are not readily palpated.

It would not take too much effort to make this book an outstanding text for use by students in physical diagnosis. Its historical references are interesting and it is very readable. However, to be a good textbook for medical students it must be painstakingly accurate.

LAWRENCE E. PUTNAM, M.D.

The Recovery Room—Immediate Postoperative Management. MAX S. SADOVE, M.D., Professor of Surgery (Anesth.) and Head, Division of Anesthesiology, University of Illinois College of Medicine and the Research and Educational Hospitals, AND JAMES H. CROSS, M.D., Clinical Assistant Professor in Surgery, University of Illinois College of Medicine, with contributions by 24 authorities. Price, $12.00. Pp. 597, illustrated. Philadelphia: Saunders, 1956.

This book is well printed and bound, excellently written, with sufficient illustrations and elaborate diagrams. It is exceptionally complete in its coverage of the subject and related topics. The authors feel that they were rather forced into the writing of this present treatise by the fact that all their previous assays in this regard were, they felt, definitely inadequate. This explains the almost encyclopedic character of this present work.

The first 3 and the last chapters of the book contain the authors' ideas in detail regarding the conditions to be sought in the location, size, and the physical necessities of the unit (Intensive Therapy and/or the Postoperative Recovery Room), the personnel and their training, and the drugs, equipment, and apparatus which should of necessity be always at hand. The technics, of which the personnel must have knowledge and experience, are thoroughly explained and illustrated. The authors make it plain that it is a false premise indeed to consider such a unit as a temporary expedient; only its permanency can make it of real value.

In the other chapters the reader is given repeated and full outlines of the care of patients under different specialties. This should be of particular interest, not only to the anesthesiologists but to all specialists.

The authors' entire presentation is not only well founded scientifically but it is also reasonable and sensible. Likewise they state that such a unit may be established on a modest scale.

It is heart-warming to note, in a scientific work such as this, the adherence to basic formulae of medical practice. As one especially interested in the care of the pre-, post-, and operative patient, it is gratifying personally to note the authors' oft-repeated words, that "moving an unconscious patient is extremely hazardous," and "continuous, uninterrupted observation (of the patient) is necessary," and that "movement may precipitate aggravation of the patient's condition." The possessor of scientific knowledge is thrice blessed if he possesses common sense.

This book is a valuable addition to medical literature, and hospital residents and interns, surgeons, and anesthesiologists, especially, may benefit from its frequent use.

J. B. B.

Tuberculosis in Obstetrics and Gynecology. GEORGE SCHAEFER, M.D., F.A.C.S., F.I.C.S., Assistant Professor of Clinical Obstetrics and Gynecology, Cornell University Medical College; Attending Obstetrician and Gynecologist, Triboro Hospital; Diplomate, American Board of Obstetrics and Gynecology; Fellow, American Academy of Obstetrics and Gynecology; Fellow, American Trudeau Society. Price, $8.75. Pp. 307, with 58 illustrations. Boston: Little, 1956.

This book, according to the author, "is an attempt to explain the present status of tuberculosis in obstetrics and gynecology to the general practitioner, the obstetrician and gynecologist, and the phthisiologist." This stated aim has been achieved in an authoritative, direct, well-organized, informative, and comprehensive manner. In addition, it is entertaining in the discussion of controversial aspects of the subject and is provocative to clinical thinking.

The author presents differences of opinion in complete fairness, but he does not hesitate to state his practice in the various problems encompassed by the subject. Such an approach makes the work an excellent guide in the management of specific clinical problems which may confront the practitioner.

The book is short. In fact, this reviewer would enjoy the expansion of several segments of the text, and especially the section on General Aspects of Tuberculosis and Its Treatment. Presentation and review of fundamental knowledge, such as the pharmacology of the useful chemotherapeutic agents, might aid the casual visitor to this specialty in a rational approach to his problems.

This book is well illustrated, well indexed, and has a complete list of references following each chapter. It is useful and is recommended to all interested in obstetrics and gynecology.

JAMES D. BREW, JR., M.D.

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

Transactions of the American Therapeutic Society, 1949–1950, 1951–1952. Francis M. Pottenger, Jr., M.D., Editor. Published by the American Therapeutic Society, 1955.

Williams Obstetrics, 11th edition. Nicholson J. Eastman, M. D., Professor of Obstetrics, Johns Hopkins University, and Obstetrician-in-Chief to the Johns Hopkins Hospital. Price, $14.00. Pp. 1212, illustrated. New York: Appleton, 1956.

Diseases of the Heart, 2nd edition. Charles K. Friedberg, M.D., Attending Physician, The Mount Sinai Hospital, New York; Associate Clinical Professor of Medicine, College of Physicians and Surgeons, Columbia University. Price, $18.00. Pp. 1161, with 157 illustrations. Philadelphia: Saunders, 1956.

Diseases of the Breast. C. D. Haagensen, M.D., Professor of Clinical Surgery, The College of Physicians and Surgeons, Columbia University; Director of Surgery, The Francis Delafield Hospital, Columbia-Presbyterian Medical Center. Price, $16.00. Pp. 751, with 404 figures and 25 charts. Philadelphia: Saunders, 1956.

Health for the American People. A Symposium presented Monday, November 21, 1955, at the Centennial Celebration of the Massachusetts Memorial Hospitals. Price, $1.00. Pp. 105. Boston: Little, 1956.

Rosenau Preventive Medicine and Public Health, 8th edition. Kenneth F. Maxcy, M.D., Dr.P.H., Professor Emeritus of Epidemiology, The Johns Hopkins University, School of Hygiene and Public Health, with 27 contributing authors. Price, $15.00. Pp. 1465, illustrated. New York: Appleton, 1956.

Dictionary of Poisons. Ibert Mellan and Eleanor Mellan. Price, $4.75. Pp. 150. New York: Philos. Libr., 1956.

Morals in Medicine. Thomas J. O'Donnell, S.J., Regent and Professor of Medical Ethics, Georgetown University School of Medicine; Georgetown University Hospital. Price, $3.75. Pp. 281. Westminster, Md.: Newman Press, 1956.

Educating Spastic Children. The Education and Guidance of the Cerebral Palsied. F. Eleanor Schonell, M.A., Ph.D., Formerly Research Fellow, University of Birmingham, Department of Paediatrics and Child Health. Price, $6.00. Pp. 242, illustrated. New York: Philos. Libr., 1956.

Clinical Pathology—Application and Interpretation, 2nd edition. Benjamin B. Wells, M.D., Ph.D., Director of Clinical Investigation, The Lynn Clinic, Detroit; Former Professor of Medicine, Creighton University School of Medicine, Omaha. Price, $8.50. Pp. 488, with 25 illustrations. Philadelphia: Saunders, 1956.

Dermabrasion—Robinson

(*Continued from page 677*)

Farragut Medical Building
Washington 6, D. C.

BIBLIOGRAPHY

1. Kurtin, A.: Paper presented before the meeting of the Section on Dermatology of Mt. Sinai Hospital in New York City, January, 1952.
2. Kurtin, A.: Corrective surgical planing of skin; new technic for treatment of acne scars and other skin defects. A.M.A. Arch. Dermat. & Syph., 1953, **68**, 389.
3. Robinson, M. M.: Removal of cosmetic defects by dermabrasive surgery. M. Ann. District of Columbia, 1955, **24**, 17.

". . . Without Precedent . . ."—Observer

(*Continued from page 688*)

group became mothers, some having 2 and 3 children.

All in all, this picture of our youth should be heartening to our people. It would seem to promise for our country not only a vastly increased population, but a vigorous one.

T. W.

On the Lighter Side—Kadan

(*Continued from page 693*

Chuckle note: Never contradict your wife. Listen awhile and she will contradict herself. Believe me, it is better that way. . . . You can tell a married woman by the ring on her finger. But you can't tell her much.

J. Earl Kadan, M.D.

MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA

VOLUME XXV, 1956

INDEX

Scientific Articles

Agammaglobulinemia: a syndrome, (McPhaul) 599
Aging, organismal: See Cybernetics
Albert, S. N., Sites, J. G., and Eccleston, H. N., Jr.: Hypothermia and hypotension for major pelvic surgical procedures, 313
Alcohol, reaction to, caused by occupational agent (N-butyraldoxime), (Lewis and Schwartz) 485
Allergic Diseases, preventive measures in, (Seltzer) 196
Allergy: See Hay Fever
Allergy, clinical and biochemical aspects of, (Bernton) 357
Allergy to insect stings; illustrative case report, (Brown) 27
Amniotic Fluid Embolism with recovery following laparotrachelotomy; report of case, (Ellis and Nunan) 375
Amputation Stump Infection, control of, with antiseptic skin detergent, (Gordon, Bufalino, McFarland and Brown) 367
Anemia, sickle cell, studies in: IX. Preliminary evaluation of psychologic aspects, (Cutter, Clark, Scott and Greene) 17
Anorexia Nervosa: review, (Cole) 605
Aschenbach, E. H.: Use of Metrazol in non-institutionalized elderly patients, 70

Ballinger, W. M.: See Taggart, S. R., jt. auth.
Bergemann, T.: See Sugar, S. J. N., jt. auth.
Bernton, H. S.: Clinical and biochemical aspects of allergy, 357
Beverages: See Tea
Bieren, R.: Myomectomy, 318
  Pelvic irradiation for benign lesions, 430
Blades, B.: See Gwathmey, O., jt. auth.
Blood Pressure, low: Hypothermia and hypotension for major pelvic surgical procedures, (Albert, Sites and Eccleston) 313
Blood Proteins: Agammaglobulinemia: a syndrome, (McPhaul) 599
Blood Volume, simple bedside technic for measuring, clinical application of, (Gruver) 299
Bones, chondrodystrophy: See Femur
Brick, I. B.: Clinical perspectives in chronic ulcerative colitis, 7
Brofman, B. L.: Clinical aspects of surgery for coronary artery heart disease, 1
Bronchiectasis: See Kartagener's Syndrome
Brown, B. G.: Treatment of thyroditis, 427
Brown, E. M.: See Gordon, E. J., jt. auth.
Brown, H.: Allergy to insect stings; illustrative case report, 27
  See Fuchs, M., jt. auth.
Bufalino, C. T.: See Gordon, E. J., jt. auth.
Cancer: "Fight cancer with a check-up—and a check," (Klopp) 191
Cancer: See Thyroid Cancer
Carcinoid Tumor, functioning—a new clinical entity; review of clinical features of nonfunctioning and functioning carcinoid, including review of thirty-eight cases from the literature, (Mattingly) 239, 304
Cardiac Glycosides, (Koppanyi and Leonard) 177
Children, heart disease in, (Nestor and Rice) 616
Chlorpromazine and Reserpine; symposium on experiences at Saint Elizabeths Hospital, (Overholser, Waldrop, Riesenman, Fong, Farley, and Hoffman) 255
Clark, H. M.: See Cutter, F., jt. auth.
Cole, M.: Anorexia nervosa: a review, 605
Colitis, chronic ulcerative, clinical perspectives in, (Brick) 7
Connor, D. H.: Diagnostic case problem—lipoid pneumonia, 654, 672, 678
Coronary Artery Heart Disease, clinical aspects of surgery for, (Brofman) 1
Crile, G., Jr.: See Winship, T., jt. auth.
Cromer, J. K.: Pros and cons of Tissue Committee; point of view of obstetrician and gynecologist, 158
Cutter, F., Clark, H. M., Scott, R. B., and Greene, C. S.: Studies in sickle cell anemia. IX. Preliminary evaluation of psychologic aspects, 17
Cybernetics: Are organismal aging and aging death necessarily the result of death of vital cells in the organism? (A cybernetic theory of aging), (Still) 199

Davies, J. W.: Man's assumption of erect posture: its effect on position of pelvis; gynecologic and obstetrical applications, 372
Den, A. A. J.: Pros and cons of Tissue Committee; introduction, 158
Depression: Meprobamate in anxiety reactions involving depression, (Ruchwarger) 555
  Ritalin—new agent for mild depressions; preliminary report, (Jacobson) 491
Dermabrasion of cosmetic defects, (Robinson) 673
DeVault, V. T.: Medical program of the Foreign Service, 107
Diabetes Mellitus, management of, with Orinase; preliminary report, (Sugar, Levitsky and Bergemann) 529
Diffuse Interstitial Pulmonary Fibrosis of Hamman and Rich; report of case, (Guillaudeu and Jaquet) 432
Dimethylamino-n-propylphenothiazine, use of, in management of patients with acute mental disturbances, (Fazekas, Sullivan and Schultz) 67
Disaster, emergency medical services in, (Williams and Rayner) 655

Drug Therapy: See Chlorpromazine; Dimethylamino-n-propylphenothiazine; Meprobamate; Metrazol; Orinase; Plimasin; Reserpine; Ritalin

Duffy, B. J., Jr.: See Winship, T., jt. auth.

Dyer, R. F.: Rheumatic erythemas, 547

Eccleston, H. N., Jr.: See Albert, S. N., jt. auth.

Ectodermal Defect, congenital, with amastia, (Osbourn) 204

Ellis, G. J., and Nunan, S. P.: Amniotic fluid embolism with recovery following laparotrachelotomy; report of case, 375

Endocarditis, bacterial, (Hussey, Finland and Hufnagel) 77

Farley, O. R.: Complications and concomitants (with use of chlorpromazine and reserpine); symposium on experiences at Saint Elizabeths Hospital, 263

Fazekas, J. F., Sullivan, P. D., and Schultz, J. D.: Use of dimethylamino-n-propylphenothiazine in management of patients with acute mental disturbances, 67

Femur, abnormalities of: Marked deformities of femora in an adult chondrodystrophic dwarf corrected by multiple osteotomies, (Herzmark) 316

Finland, M.: See Hussey, H. H., jt. auth.

Fistula, pulmonary arteriovenous; review with report of case, (Ware) 117

Fong, T. C. C.: Chlorpromazine and reserpine in geriatric patients; symposium on experiences at Saint Elizabeths Hospital, 260

Foreign Service [Department of State], medical program of, (DeVault) 107

Frazell, E. L.: See Winship, T., jt. auth.

Frohman, I. P.: Tea, 320

Fuchs, M., and Brown, H.: Plimasin in treatment of hay fever, 553

Fulcher, O. H.: Pros and cons of Tissue Committee; point of view of surgeon, 160

Goiter: See Thyroid Cancer

Gordon, E. J., Bufalino, C. T., McFarland, N., and Brown, E. M.: Control of amputation stump infection with an antiseptic skin detergent, 367

Greene, C. S.: See Cutter, F., jt. auth.

Gruver, R. H.: Clinical application of a simple bedside technic for measuring blood volume, 299

Guillaudeu, R. L., and Jaquet, P.: Diffuse interstitial pulmonary fibrosis of Hamman and Rich; report of case, 432

Gwathmey, O., Keshishian, J. M., Kelser, G. A., Jr., and Blades, B.: Left heart catheterization, 589

Gynecology: Pelvic irradiation for benign lesions, (Bieren) 430

Hay Fever, Plimasin in treatment of, (Fuchs and Brown) 553

Heart: See Cardiac Glycosides; Coronary Artery Heart Disease; Endocarditis

Heart: Left heart catheterization, (Gwathmey, Keshishian, Kelser, and Blades) 589

Heart Disease in Children, (Nestor and Rice) 616

Hernia, Spigelian; report of four cases, (Isaacson) 23

Herzmark, M. H.: Marked deformities of femora in an adult chondrodystrophic dwarf corrected by multiple osteotomies, 316

Hoffman, J. L.: General summary (re chlorpromazine and reserpine); symposium on experiences at Saint Elizabeths Hospital, 267

Hufnagel, C. A.: See Hussey, H. H., jt. auth.

Hospital Clinical Conferences: See Endocarditis

Hussey, H. H., Finland, M., and Hufnagel, C. A.: Bacterial endocarditis; District of Columbia General Hospital Clinical Conference, 77

Hyperthroidism, medical management of, (Kyle) 594

Hypothermia and Hypotension for major pelvic surgical procedures, (Albert, Sites and Eccleston) 313

Industrial Medicine: An occupational agent (N-butyraldoxime) causing reaction to alcohol, (Lewis and Schwartz) 485

Industries and Trades, selected, District of Columbia blood-testing survey for syphilis in, (Taggart, Morgan and Pendleton) 73

Infertility, recent advances in, (Simmons) 415

Insect Stings, allergy to; illustrative case report, (Brown) 27

Isaacson, N. H.: Spigelian hernia; report of four cases, 23

Jacobson, A.: Ritalin—a new agent for mild depressions; a preliminary report, 491

Jaquet, P.: See Guillaudeu, R. L., jt. auth.

Kartagener's Syndrome: review of literature and report of case, (Maret and Miller) 668

Katz, S.: Chemotherapy of tuberculosis. Part I. Background factors, 59; Part II. Practical aspects, 129

Kelser, G. A,. Jr.: See Gwathmey, O., jt. auth.

Keshishian, J. M.: See Gwathmey, O., jt. auth.

Kidney: Partial nephrectomy for anomalies of pelvis and calyces of kidney; discussion of 100 cases of recurrent pyelonephritis, (Stirling) 123

King, E. R.: Present status of radioiodine in thyroid disease, 473

Klein, G.: Experimental evaluation of a divided rolling mattress for spinal traction, 651

Klopp, C. T.: "Fight cancer with a check-up—and a check," 191
  See Winship, T., jt. auth.

Koppanyi, T., and Leonard, J. J.: Cardiac glycosides, 177

Kyle, L. H.: Medical management of hyperthyroidism, 594

Leonard, J. J.: See Koppanyi, T., jt. auth.
Levitsky, L. R.: See Sugar, S. J. N., jt. auth.
Lewis, N. D. C.: Review of scientific publications from St. Elizabeths Hospital during past 100 years, 143
Lewis, W., and Schwartz, L.: An occupational agent (N-butyraldoxime) causing reaction to alcohol, 485
Lungs, disease of: Diffuse interstitial pulmonary fibrosis of Hamman and Rich; report of case, (Guillaudeu and Jaquet) 432

Maret, R., and Miller, D. C.: Kartagener's syndrome: review of the literature and report of a case, 668
Mattingly, T. W.: Functioning carcinoid tumor—a new clinical entity; review of clinical features of nonfunctioning and functioning carcinoid, including review of thirty-eight cases from the literature, 239, 304
McClintock, J. C., and Sewell, W. H.: Thyroid disease in pediatrics, 419
McClintock, J. C.: See Winship, T., jt. auth.
McFarland, N.: See Gordon, E. J., jt. auth.
McPhaul, J. J., Jr.: Agammaglobulinemia; a syndrome, 599
Mennell, J. M.: Pain in osteoarthritis—a working hypothesis as a basis for treatment, 495
Mental Disturbances, acute, use of dimethylamino-n-propylphenothiazine in management of patients with, (Fazekas, Sullivan and Schultz) 67
Meprobamate in anxiety reactions involving depression, (Ruchwarger) 555
Metrazol, use of, in non-institutionalized elderly patients, (Aschenbach) 70
Miller, D. C.: See Maret, R., jt. auth.
Miltown: See Meprobamate
Morgan, T.: See Taggart, R., jt. auth.
Myomectomy, (Bieren) 318

N-butyraldoxime, occupational agent, causing reaction to alcohol, (Lewis and Schwartz) 485
Nestor, J. O., and Rice, E. C.: Heart disease in children, 616
Nunan, S. P.: See Ellis, G. J., jt. auth.

Obstetrics: Amniotic fluid embolism with recovery following laparotrachelotomy; report of case, (Ellis and Nunan) 375
Obstetrics: Recent advances in infertility, (Simmons) 415
Old Age: See Chlorpromazine and Reserpine; Metrazol
Orinase: See Diabetes Mellitus
Orthopedics: See Spinal Traction
Osbourn, R. A.: Congenital ectodermal defect with amastia, 204
Osteoarthritis, pain in—working hypothesis as basis for treatment, (Mennell) 495
Overholser, W., Waldrop, F. N., Riesenman, F. R., Fong, T. C. C., Farley, O. R., and Hoffman, J. L.: Chlorpromazine and reserpine; symposium on experiences at Saint Elizabeths Hospital, with introductory remarks, (Overholser) 255

Pediatrics, thyroid disease in, (McClintock and Sewell) 419
Pelvic Irradiation for benign lesions, (Bieren) 430
Pelvic Surgical Procedures, major, hypothermia and hypotension for, (Albert, Sites and Eccleston) 313
Pelvis: Man's assumption of erect posture: its effect on position of pelvis; gynecologic and obstetrical applications, (Davies) 372
Pendleton, J.: See Taggart, R., jt. auth.
Plimasin in treatment of hay fever, (Fuchs and Brown) 553
Pneumonia, lipoid—diagnostic case problem, (Connor) 654, 672, 678
Psychiatry: Saturday sanctuary: essay on passive dependency, (Scanlon) 380
Pulmonary Arteriovenous Fistula; review with report of case, (Ware) 117
Pyelonephritis: Partial nephrectomy for anomalies of pelvis and calyces of kidney; discussion of 100 cases of recurrent pyelonephritis, (Stirling) 123

Radioiodine in Thyroid Disease, present status of, (King) 473
Rayner, J. F.: See Williams, H. B., jt. auth.
Reserpine: See Chlorpromazine
Rheumatic Erythemas, (Dyer) 547
Rice, E. C.: See Nestor, J. O., jt. auth.
Riesenman, F. R.: Chlorpromazine; symposium on experiences at Saint Elizabeths Hospital, 258
Ritalin—new agent for mild depressions; preliminary report, (Jacobson) 491
Robinson, M. M.: Dermabrasion of cosmetic defects, 673
Ruchwarger, A.: Meprobamate in anxiety reactions involving depression, 555

Saint Elizabeths Hospital, review of scientific publications from, during past 100 years, (Lewis) 143
  Symposium on experiences with chlorpromazine and reserpine, (Overholser et al) 255
Scanlon, J. P.: Saturday sanctuary: essay on passive dependency, 380
Schultz, J. D.: See Fazekas, J. F., jt. auth.
Schwartz, L.: See Lewis, W., jt. auth.
Scott, R. B.: See Cutter, F., jt. auth.
Seltzer, A.: Preventive measures in allergic diseases, 196
Sewell, W. H.: See McClintock, J. C., jt. auth.
Sickle Cell Anemia, studies in: IX. Preliminary evaluation of psychologic aspects, (Cutter, Clark, Scott and Greene) 17
Simmons, F. A.: Recent advances in infertility, 415
Sites, J. G.: See Albert, S. N., jt. auth.
Spinal Traction, divided rolling mattress for, experimental evaluation of, (Klein) 651
Still, J. W.: Are organismal aging and aging death necessarily the result of death of vital cells in the organism? (A cybernetic theory of aging), 199
Stirling, W. C.: Partial nephrectomy for anomalies of the pelvis and calyces of the kidney; discussion of 100 cases of recurrent pyelonephritis, 123

Sugar, S. J. N., Levitsky, L. R., and Bergemann, T.: Management of diabetes mellitus with Orinase; preliminary report, 529

Sullivan, P. D.: See Fazekas, J. F., jt. auth.

Syphilis: Practitioner and syphilologist discuss a common problem, (Taggart and Ballinger) 663

Syphilis in selected industries and trades, District of Columbia blood-testing survey for, (Taggart, Morgan and Pendleton) 73

Taggart, S. R., and Ballinger, W. M.: Practitioner and syphilologist discuss a common problem, 663

Taggart, S. R., Morgan, T., and Pendleton, J.: District of Columbia blood-testing survey for syphilis in selected industries and trades, 73

Tea, (Frohman) 320

Thyroid: See Hyperthyroidism

Thyroid Cancer: Diagnosis and treatment of nodular goiter and thyroid cancer, (Winship, Crile, Frazell, Klopp, McClintock, and Duffy) 534

Thyroid Disease in pediatrics, (McClintock and Sewell) 419

Thyroid Disease, present status of radioiodine in, (King) 473

Thyroiditis, treatment of, (Brown) 427

Tissue Committee, pros and cons of: introduction, (Den) 158; point of view of obstetrician and gynecologist, (Cromer) 158; point of view of surgeon, (Fulcher) 160; point of view of pathologist, (Winship) 162; point of view of attorney, (Welch) 163

Tuberculosis, chemotherapy of: Part I. Background factors, 59; Part II. Practical Aspects, (Katz) 129

Uterus, fibroma: Myomectomy, (Bieren) 318

Waldrop, F. N.: Reserpine; symposium on experiences at Saint Elizabeths Hospital, 256

Ware, G. W.: Pulmonary arteriovenous fistula; review with report of a case, 117

Welch, H. M.: Pros and cons of Tissue Committee; point of view of attorney, 163

Williams, H. B., and Rayner, J. F.: Emergency medical services in disaster, 655

Winship, T.: Pros and cons of Tissue Committee; point of view of pathologist, 162

Winship, T., Crile, G., Jr., Frazell, E. L., Klopp, C. T., McClintock, J. C., and Duffy, B. J., Jr.: Diagnosis and treatment of nodular goiter and thyroid cancer; panel discussion, 534

GENERAL

A

Abernethy, T. J., appointed chief of Medical Department, Emergency Hospital, 347
Alfaro, V. R., named junior delegate, Medical Society of D. C., to AMA, 463
Alpert, L. K., elected to Council, American Diabetes Association, 467
American Red Cross: Dr. Gibson appointed national director of Blood Program (photo), 291
April, E., appointed consultant to Council on Pharmacology and Chemistry, AMA, 350
Argy, W. P.: Washington's Crippled Children's program, 631
Armed Forces Medical Library: bill to create National Library of Medicine, 292, 339, signed 519; first home of Surgeon General's Library (photo), 272; (Observer) 280; portrait collection, 347; see Editorials, 271, 273; transferred to PHS, 641
Armstrong, G. E., elected vice chairman, VA Special Medical Advisory Group, 467; recipient of Founder's Medal from Association of Military Surgeons, 695

B

Baensch, W. E., elected to Alpha Omega Alpha, 350
Barger, G. J. P.: see On the Lighter Side, 693
Bates, H. C., Jr., president-elect of Medical Society of Virginia, 699
Bayne-Jones, S., retired as Technical Director of Research, SGO, 466
Beachley, R. G., elected to British Royal Society of Health (photo), 581
Belt, N., elected president of Frederick County (Md.) Medical Society, 53
Bernton, H. S., selectee for Kober Lecturer, 50; biography (photo), 101
Bird, J. W., honored by Woman's Auxiliary to Montgomery County Medical Society, 294
Blair, M., Jr., appointed to D. C. Public Health Advisory Council, 644
Books Received, 55, 115, 227, 407, 467, 577, 649, 706
Book Reviews:
  Barrow, R. L., and Fabing, H. D.: Epilepsy and the Law, (Smith) 702
  Brams, W. A.: Your Blood Pressure and How to Live With It, (Guillaudeu) 583
  Brill, N. Q., and Beebe, G. W.: A Follow-up Study of War Neuroses, (Nenno) 647
  Cowdry, E. V.: Cancer Cells, (Weiss) 405
  Diggs, L. W., Sturm, D., and Bell, A.: The Morphology of Human Blood Cells, (Barr) 647
  Dunham, E. C.: Premature Infants—A Manual for Physicians, 2nd ed., (Penick) 56
  Ellis, R.: A Dictionary of Dietetics, (Billingsley) 703
  Fluhmann, C. F.: The Management of Menstrual Disorders, (Renshaw) 647
  Harvey, A. M., and Bordley, J., III: Differential Diagnosis—The Interpretation of Clinical Evidence, (Moser) 56
  Hinshaw, H. C., and Garland, L. H.: Diseases of the Chest, (Hussey) 583
  International Anesthesia Research Society, edited by: Proceedings, World Congress of Anesthesiologists, (Leahy) 648
  Ivy, A. C., Pick, J. F., and Phillips, W. F. P.: Observations on Krebiozen in the Management of Cancer, (Schanno) 703
  Major, R. H., and Delp, M. H.: Physical Diagnosis, 5th ed., (Putnam) 703
  Marshall, V. F.: Textbook of Urology, (Mason) 583
  Miller, S. E., editor: A Textbook of Clinical Pathology, 5th ed., (McCurdy) 584
  Sadove, M. S., and Cross, J. H.: The Recovery Room—Immediate Postoperative Management, (Bogan) 705
  Schaefer, G.: Tuberculosis in Obstetrics and Gynecology, (Brew) 705
  Sodeman, W. A., editor: Pathologic Physiology—Mechanisms of Disease, 2nd ed., (Yater) 584
  Sternberg, T. H., and Newcomer, V. D., editors: Therapy of Fungus Diseases—An International Symposium, (Gocke) 406; (Seltzer) 648
  Tauber, R.: Basic Surgical Skills—A Manual with Appropriate Exercises, (Rayford) 406
  Titus, P., revised by Willson, J. R.: The Management of Obstetric Difficulties, 5th ed., (Winshel) 57
  Williamson, P.: Office Procedures, (McCune) 297
  Wolf, S., Cardon, P. V., Jr., Shepard, E. M., and Wolff, H. G.: Life Stress and Essential Hypertension—A Study of Circulatory Adjustments in Man, (Finnerty) 406
  Wolstenholme, G. E. W., and Cameron, M. P., editors for Ciba Foundation, assisted by Etherington, J.: Ciba Foundation Colloquia on Ageing: Volume I, General Aspects, (Fazekas) 115
  Wolstenholme, G. E. W., and Millar, E. E. P., editors for Ciba Foundation: Ciba Foundation Symposium on Extrasensory Perception, (Odenwald) 649
Borden, D. E., elected to Board of Trustees, George Washington University (photo), 349
Brew, J. D., Jr., elected fellow of American College of Surgeons, 53
Brick, I. B., biography (photo), 9; elected to American Gastroenterological Association, 352
Briggs, C. D., appointed chief of Surgical Department, Emergency Hospital, 347
Brigulio, A. E., appointed general chairman, Committee on Arrangements, 1957 Annual Scientific Assembly, 698; moderator, Course in Disaster Medicine (photo), 396; chairman, sponsoring committee, 398
Brown, T. M., cited by District Commissioners' Committee on Employment of Physically Handicapped, 403; honored by Sidwell Friends School, 112
Buchanan, J. J., appointed to D. C. Hill-Burton Advisory Council, 294
Buckingham, D. E., cited by D. C. Veterinary Medical Association, 52

Bullard, D. M., president, Southern Psychiatric Association, 639

Burka, I., elected first vice president of Medical Society of D. C., 336

Burwell, H. R., elected fellow of American College of Surgeons, 695

Bush, C. K., Jr., director of architectural study for American Psychiatric Association, 113

C

Cake, C. P., honored by Virginia Tuberculosis Association, 350

Camalier, C. W., Jr.: Report of the Committee on Medical Care, 223

Cantor, P. D., admitted to D. C. Bar, 52

Caulk, R. M.: assumes presidency of D. C. Medical Society (photo), 387; SMA Golden Anniversary Meeting: greeting (photo), 567, member, Executive Committee, Washington Committee on Arrangements (photo), 572; see President's Page

Cavanagh, J. R., honored by Georgetown University Alumni Club, 234

Chan, W. L., appointed to medical staff, George Washington University, 522

Chapman, J. E., moderator, Course in Disaster Medicine (photo), 396

Ciba Pharmaceutical Products, Inc., "Medical Horizons," TV series, 465

Choisser, R. M., named professor emeritus of pathology, George Washington University, 404

Clark, O. W.: Public Health Advisory Council, 216

Claud, H. L., member, Executive Committee, Washington Committee on Arrangements, SMA Golden Anniversary Meeting (photo), 572

Cobb, W. M., appointed to D. C. General Vocational Rehabilitation Advisory Council, 293; elected chairman, D. C. Public Health Advisory Council, 644; see On the Lighter Side (photo), 693

Cobey, M. C., elected vice chairman, Section on Orthopedics, Southern Medical Association, 54; moderator, Course in Disaster Medicine (photo), 396

Coe, F. O., nominated vice president, Washington Academy of Sciences, 169, 220

Coffey, R. J., elected member of American Surgical Association, 350

Comanduras, P. D., appointed fellow of China Medical Board, 351

Copeland, E. P., portrait of, presented to Children's Hospital, 700

Copeland, M. M., appointed chairman, Cancer Control Committee, National Cancer Institute, 172; appointed to National Awards Committee of National Science Teachers' Association and National Cancer Institute, 172; reappointed to Educational Committee, American Cancer Society, 172

Correspondence:
- Daniels, W. B.: President's Page and politics, 582; reply (Caulk), 583
- Mattingly, T. E.: Fees for Workmen's Compensation cases, 236; reply, (Wells) 236
- Pellegrini, F. S.: Greater Southeast Hospital Foundation, 297
- VanRiper, H. E.: Cöoperation of Medical Society with National Foundation for Infantile Paralysis appreciated, 354
- Wright, W. A.: Sears-Roebuck Foundation plan of assistance, 582

Costenbader, F. D., honored by American Academy of Ophthalmology and Otolaryngology, 695

Cram, E. B., honored on retirement from NIH, 700

Cronin, J. W., appointed chief, Bureau of Medical Services, PHS, 699

Crook, J. R., Jr.: Workmen's Compensation laws, 453

D

Darner, H. L., awarded honorary degree by Western Maryland College, 349

Davidson, E. Y., honored on President's Night (photo), 346

Davis, E. W., honored by Georgetown University, 294; reëlected Governor of American College of Chest Physicians for D. C., 465

Davis Memorial Goodwill Industries: medical director appointed, 232; new Rehabilitation Center dedicated, 348

Davis, W.: Science for youth, 167

Davis, W. J. G., appointed to D. C. Professional Vocational Rehabilitation Advisory Council, 293

Detwiler, R. H., honored by Georgetown University, 294; recipient of Welburn Award, 522

DeVault, V. T., appointed to International Executive Council of International College of Surgeons, 234

District of Columbia:
- Birth, death and stillbirth certificates revised, 46; see Editorial (Oppenheimer), 33
- Disaster Medical Training Center, 519
- Health Department: see In and Out of Focus, 624; President's Page, 679
- Health situation in D. C. and what private physicians can do to improve it, (McLaughlin) 341
- Letter to Commissioner David B. Karrick concerning our hospitals (editorial), 326
- Narcotic Act of 1938, amendments re oral prescriptions, 513
- Public Health Advisory Council, (Clark) 216; appointees to, 644
- Uniform Narcotic Drug Act, new regulations for, 45
- Vocational Rehabilitation: new headquarters, 170; General Advisory Council, 293; Professional Advisory Council, 293

Dodek, S. M., presents John Ordronaux Award to nephew (photo), 401

Dolan, W. D., honored by Arlington Chapter, American Cancer Society, 644

Dorman, H. P., elected fellow of American College of Surgeons, 53

Dorman, P. S., receives M.S. degree from University of Pennsylvania, 234

Dunkley, R. E., member, Executive Committee, Washington Committee on Arrangements, SMA Golden Anniversary Meeting (photo), 572
Dunn, W. L., elected to Board of Censors, Medical Society of D. C., 336
Duval, A. M., to make study of Fairview State Hospital in Pennsylvania, 233; reappointed to District Commissioners' Youth Council, 700

E

Ecker, H. D., appointed to Board of Trustees, Medical Service, 220
Editorials:
  Births and deaths, important changes in reporting, (Oppenheimer) 33
  Blood, what's going on in? (Wilson) 388
  "Bread upon the waters" [A.M.E.F.], (Fitzgerald) 506
  Cancer control, does the physician do his part in? (Giffin) 149
  Committee appointments, (White) 440
  Constructive medicine: a definition, (Stieglitz) 207
  Dentistry in preventive medicine, (Smith) 275
  Diabetes detection, physician's responsibility in, (Moss) 558
  "Disability freeze" program, medical aspects of, (Farrell) 270
  Doctor in community affairs, (Woody) 389
  Enzymes and the prostate, (Herbst) 151
  Family doctors to assemble in Washington [for Assembly of AAGP], 89
  Foreign residents and interns, (White) 32
  Group Hospitalization, Inc. as seen by its Director, (Rawlings) 329
  Hobby for physicians, (Peery) 92
  Hospital Council, (Bucher) 621
  Insurance program, new, the doctors and, (Den) 153
  Internist, plight of the, 680
  Juvenile delinquency, (Hussey) 91
  Letter to Commissioner David B. Karrick concerning our hospitals, 326
  Look, a, at the record, [national medical legislation], (Alphin) 504
  Looking ahead—1956, (McLaughlin) 31
  Medical education, cost of, (Peery) 503
  Medical Emergency and Disaster program, (Schildhaus, Chapman, Mitchell and Russell) 210
  Medical libraries, on, and their location, [Armed Forces Medical Library], (Overholser) 273
  Medical Service, the change in, (Stubbs) 90
  Medical Service—1957, (Stubbs) 681
  Operating room space in the hospital, (Stubbs) 328
  Personal invitation, a, [to S.M.A. meeting], (McKenzie) 558
  Polio ahead: the reasons behind the 1956 March of Dimes, (Van Riper) 34
  Polio vaccine, Salk: 1956 emergency dosage schedule, (Van Riper) 273
  Prepayment on the march [Medical Service of D. C.], (Rawlings) 210
  Priceless heritage [Armed Forces Medical Library], (Ramsey) 271
  Psychiatry, dilemma of, in Nation's Capital, (Lebensohn) 559
  Rehabilitation, (McLendon) 682
  Release of potent drugs to over-the-counter sales, (Seltzer) 438
  Scientific contributions to the ANNALS, (White) 150
  Summer students, (Eckburg) 623
  Washington Hospital Center, (Brown) 439
  What they read tomorrow, (Donahue) 620
Eichenlaub, F. J., honored by Georgetown Clinical Society, 295
Eldridge, W. W., to retire from staff of St. Elizabeths Hospital (photo), 351

F

Fazekas, J. F., honored by staff members of D. C. General Hospital (photo), 522
Feffer, J. J., reëlected president of District Tuberculosis Association, 399
Feldman, I., elected fellow of International College of Surgeons, 581
Fields, R. J., honored by American Social Hygiene Association, 404
Fischer, A. D., appointed to D. C. Professional Vocational Rehabilitation Advisory Council, 293; honored by George Washington University alumni, 295
Fitzgerald, J. E., elected advisory member of American Medical Educational Foundation, 644
Ford Foundation hospital grants, 51, 293; medical school grants, 51
Foret, M. J., program chairman, D. C. Day, 572, 690; member, Executive Committee, Washington Committee on Arrangements, SMA Golden Anniversary Meeting (photo), 572
Forster, F. M., appointed medical director, National Neurological Foundation, 521; awarded Order of Merit of Carlos Finlay, 52
Forster, F. M.: Chairman's Address: Status of medical neurology, 515
Foundation for Religious Action in the Social and Civil Order: Report on Second National Conference on Spiritual Foundations, (Yater) 47
Fraser, C. K., reappointed chairman, Obstetrical Board, 640
Freer, A., director of Medical Section, San Antonio State Tuberculosis Hospital, 113
French, L. H., photos contributed by, 396
Frohman, I. P., chairman of local arrangements, Scientific Assembly, American Academy of General Practice, 284; appointed editor, Abstracts of Scientific Assembly, AAGP, 284; appointed American editor and correspondent for *South African Practitioner*, 53; elected to Board of Directors, American Medical Writers' Association, 644
Fusfeld, C. L., recipient of Ross Award at American Academy of General Practice meeting (photo), 284

G

Gannon, J. A., Sr., cited by Georgetown University (photo), 465, 466; daily radio program, 351

Gates, H. S., elected alternate delegate, Medical Society of D. C., to AMA, 336

Goodson, J. R., elected fellow of American College of Surgeons, 53

Grant, D. N. W., retired as National Director of American Red Cross Blood Program, 291

Group Health Association, plans for Silver Spring-Wheaton Branch, 642; service awards to physicians, 642

Group Hospitalization, Inc.: additional benefits under Revised Standard Contract, 226; enrollment for 1955, 111; Medical Society's appointee to Board of Trustees, 220; see Editorials (Rawlings), 210, 329

Gruver, R. H., winner of first award in essay contest for house officers (photo), 283

Gwathmey, O., elected fellow of American College of Surgeons, 53

H

Harmon, R. H., honored by George Washington University alumni, 295

Hays, S. B., elected honorary fellow of American College of Chest Physicians, 467

Herbst, W. P., elected president of American Urological Research Foundation, 403

Hoberman, J. B., appointed chief of anesthesia at Suburban Hospital, 112

Hogan, B. W., awarded honorary degree by Marquette University, 403

Holden, R. T., elected delegate, Medical Society of D. C., to AMA, 336; named senior delegate to AMA, 463; see reports of delegates to AMA on clinical session, 40, annual session, 442

Horwitz, A., honored by George Washington University alumni, 295

Hospitals:
- Grants from D. C. Division, American Cancer Society, 521; from Ford Foundation, 51, 293
- Joint study on drug reactions, 630
- See letter to Commissioner Karrick (editorial), 326; Iowa's hospital-physician trial, 44
- Urological Conferences, 579

- Alexandria, lecture series, 230
- Arlington, new wing, 642
- Children's, alumni reunion, 345; weekly conferences, 293
- District of Columbia General, grant from Washington Heart Association, 521; medical-vocational evaluation center, 465; psychiatric building begun, 231
- Doctors, construction plans, 642
- Emergency, new administrator, 643; staff appointees, 347
- Episcopal Eye, Ear and Throat, scientific seminar, 398
- Freedmen's, annual session, 399
- Garfield, annual staff dinner, 345; Kerr essay awards, 345
- Georgetown, retarded children's clinic, 441
- George Washington, grant from American Cancer Society, 642
- Hahnemann, merged with Sibley Hospital, 348
- Mt. Sinai (New York), postgraduate course, 49
- Providence, new building dedicated, 293
- St. Elizabeths: Dorothea Lynde Dix Pavilion and Chapel, dedicated, 288
- Southeast Community, site selected, 402
- Suburban, new wing dedicated, 698
- Walter Reed Army, Kimbrough Urological Seminar, 639
- Washington Hospital Center, administrators selected, 231; see Editorial (Brown), 439

Hough, W. H., honored by Garfield Hospital staff, 345

Hufnagel, C. A., elected member of American Surgical Association, 350

Hunter, O. B., Jr., general chairman, Washington Committee on Arrangements, SMA Golden Anniversary Meeting (photo), 572, 690; president-elect, American Association of Blood Banks, 644

Hussey, H. H., appointed director of Department of Medicine, Georgetown University (photo), 402; elected to Board of Trustees of AMA (photo), 459; honored by Georgetown University, 294; resigned as associate editor of MEDICAL ANNALS, 463; see reports of delegates to AMA on clinical session, 40, annual session, 442; withdrew as Medical Society's delegate to AMA, 463

Hyde, A. R., elected fellow of American College of Surgeons, 53

I

In and Out of Focus (Observer):
- Aging problem (Oslo [Norway], project), 510
- AMA's public opinion poll, 213
- Ambulance sirens, 96; P.S., 154
- Announcements (of opening an office), 279
- Anonymity—necessary or desirable? 277
- Athletic injuries (*Scope Weekly* [Upjohn]), 97
- Bradley Report (President's Commission on Veterans' Pensions), 562
- Big issue (Social Security Bill H.R. 7225), 35
- ". . . Crowning shame. . .," (Armed Forces Medical Library), 280
- Difficult assignment (revising Constitution and By-laws), 508
- Doctor's children (*Medicine in the News* [Schering]), 157
- Do doctors read their mail? 156
- Editor's silver anniversary, 683
- Endorsing applications, on, 155
- Ethics, traditions, manners, 276
- Face to face (*C and P Call*), 686
- First impressions (AMA and public relations), 565
- ". . .GP. . .king-pin. . ." (Hall [England] and Richards [Canada]), 564
- Guides—not standards (AMA's Committee to Recommend Standards for Grievance or Mediation Committees), 37
- Impartial medical testimony (Peck), 684
- Licensure, facts about, 212
- Malpractice situation, more light on, (AMA's survey of professional disability insurance), 38
- National Health Fair (continued), 39
- Nation's sick parade (in Great Britain), 509

"…Natural allies…" (Livingston [CIO]), 93
On the defensive? (Farrell), 686
President's health (Eisenhower), 94
Quieter city (Robertson), 627
Rating: lower half (D. C. Health Department), 624
"…Rough justice…" (*Lancet*), 281
Science Fairs, 560
Selecting tomorrow's physicians (Whitby), 627
Social Security and the doctor, 36; (cont.), 211
Social Security Bill H.R. 7225 becomes law, 507
"…Some bright member…" (care of postoperative patient [*The Lancet*]), 629
Soul searching (Special Bulletin of AMA re survey on public relations), 563
Toast in reverse (to Dr. Arveson), 98
"Visiting firemen" (out-of-town speakers), 625
…Without honor…? (out-of-town vs. local speakers on programs), 214
"…Without precedent…" (population gain of children [*Statist. Bull. Metrop. Life Insur. Co.*]), 688
"…Worst writing…" (Dr. Hawley—photo), 512
Worthy opponent (Davis), 215

Iowa Hospital Association vs. Attorney General of Iowa et al, summary of trial, 44

Isaacson, N. H., elected fellow of American College of Surgeons, 53

J

Jaeger-Lee, D. S., appointed consultant in pediatrics to Georgia Department of Public Health, 467

Jeghers, H., appointed head of Department of Medicine, Seton Hall University, 402

Jenkins, W. H., named clinical professor emeritus of otolaryngology, George Washington University, 404

Junior Chamber of Commerce, activities in field of health, 100

K

Kadan, J. E.: see On the Lighter Side

Kahler, E. S., elected president-elect of American Medical Women's Association (photo), 403

Karpman, B., appointed editor-in-chief, *Archives of Criminal Psychodynamics*, 112

Karsner, H. T., elected chairman of Advisory Medical Board of Leonard Wood Memorial for Eradication of Leprosy, 234; elected to New York Academy of Sciences, 699; first Carl V. Weller Lecturer, 699

Katz, S., biography (photo), 61

Kellow, W. F., appointed assistant dean of University of Illinois College of Medicine, 235

Kennedy, J. A., appointed director of Surgical Service, Veterans Administration, 232

Klopp, C. T., reëlected director, American Cancer Society, Region II, 53; reëlected president, D. C. Division, American Cancer Society, 696

Knudson, A. B. C., assumes presidency of American Congress of Physical Medicine and Rehabilitation, 699

Kober Lecturer for 1956 (Bernton), 101; Lecture, 357

L

Legislation, medical: see Editorial (Alphin), 504; see H.R. 7225 [Social Security Bill] (Observer), 507

Leonard, J. J., biography (photo), 179

Liability Insurance: see Editorial (Den), 153; Pros and cons of Tissue Committee; a symposium, 158

Lichtenberg, H. H., elected third vice president, Coöperative Health Federation of America, 700

Lilienfield, L. S., awarded fellowship by Metropolitan Heart Guild, 294

Looney, W. B., cited by Secretary of Navy, 171

Lourie, R. S., elected president-elect of American Orthopsychiatric Association, 353

Lynch, D. F., honored by American Dental Society of Anesthesiology, 700

Lyons, J. H., honored by Emergency Hospital staff members, 402

M

MacDonald, A. M., reappointed to Board of Trustees, Group Hospitalization, 220

Maksim, G., appointed chairman, Committee on School Health, American Academy of Pediatrics, 580; reappointed liaison representative of AAP to National Education Association, 580

Manchester, B., elected to Committee on Cardiovascular Diseases, American College of Chest Physicians, 54

Marshall, C. H., reappointed to District Commissioners' Youth Council, 700

Martin, S., elected second vice president of Medical Society of D. C., 336

McCarthy, L., elected honorary member, Deutsche Dermatologische Gesellschaft, 467

McIntire, R. T., cited for developing President's Committee on Employment of Physically Handicapped, 403

McLaughlin, R. E.: Health situation in the District of Columbia and what private physicians can do to improve it, 341

McLendon, P. A., appointed to D. C. Commissioners' Youth Council, 296; appointed to D. C. General Vocational Rehabilitation Advisory Council, 293; chairman, Council on Rehabilitation, 462

Medical Bureau, increase in Secretarial Service rates, 464

Medical Institution for specialized care: Hillandale Nursery School for brain-damaged children, 580

Medical Journals: *German Medical Monthly*, 349; *Medical Economics*, awards, 520; *Scottish Medical Journal*, 170; *South African Practitioner*, 349

Medical Neurology, status of, (Forster) 515

Medical Schools: grants, from Ford Foundation, 51, 641, National Foundation for Medical Education, 170; support to Student AMA Chapters, 290
George Washington University: Bischoff Award in chemistry to Dr. Roe, 465; co-host to New England Cancer Society, 110; grants, from Commonwealth Fund 401, Mrs. Markey for arthritis research 52, Vocational Rehabilitation 52, Washington Heart Association 521; Kellogg Lectures, 168; opening assembly, 641; precommencement

ceremonies 401, John Ordronaux Award to Dr. Dodek (photo), 401

- Georgetown University: grants, from PHS 52, 111, 294, 642, Washington Heart Association 521; Dr. Hussey appointed director of Department of Medicine, 402; mock disaster staged by Medical Education for National Defense Committee, 348; nursing school accredited, 111; postgraduate course, 49
- Howard University: grant from Washington Heart Association, 521

Medical Service of the District of Columbia:

- Annual meeting, 344; election of officers, 344–5
- Annual Reports: President (Stubbs), 393; Administrative Services (McGovern), 395; Committee on Physicains' Services (Nicklas), 447, (correction) 582
- Enrollment for 1955, 111
- Medical Society's appointees to Board of Trustees, 220, 344
- See editorials (Stubbs), 90, 681; (Rawlings), 210; President's Page, 618; report of Committee on Medical Care, (Camalier) 223

Medical Society of the District of Columbia:

- Annual Business Meeting, proceedings of, 332
- Boards: personnel, 411, 413; censors 336, (report) 337; executive, 50, 169, 231, 290, 347, 400, 463, 579, 640, 697, (reports) 219, 689; obstetrical, 640, 698
- Certificate for Meritorious Service, designee, 400, 571; recipient, 691
- Committees: personnel, 411, 412; American Medical Education fund, 50; cancer control, 50; coöperation with D. C. Bar Association, 698; diseases of chest, 50; emergency medical service, 210, 219, 291, 398, 697; finance, 579; grievance, 400; Health Department budget, 463; hospital regulations, 463; hospitals, 347; house, 690; medical care, (reports) 223, 689; mental health, 50, 579; National Health Fair, 50; nominating, 222; professional liability insurance, 290, 400, 698; public health, 698; public information, 110, 640; study commission on reorganization of Medical Society, 347; study of Annual Scientific Assemblies, 50
- Constitution and By-laws, amendments to: XXVII adopted, 221; XXVIII adopted, 222; XXIX proposed, 221, adopted, 340; XXX proposed, 221, adopted 340; XXXI proposed, 221, adopted, 340
- Council on Rehabilitation, appointees to, 50; personnel, 414; first meeting, 462; resolution presented to House of Delegates, AMA, 42; see Editorial (McLendon), 682, report of Executive Board, 337
- Course in Disaster Medicine, 210, 219, 338; first course, 283, 398; speakers (photos), 396; second course, 697
- Delegates, 414; American Medical Association, 336, 463, (reports) 40, 442
- District of Columbia Day, 567–72
- Doctors' Office Staffs, dinner for, 571, 579
- Doctors' Symphony Orchestra, 170, 691
- Flag, gift of Woman's Auxiliary (photo), 344, 345
- House Officers' essay contest, 43; winners, 283
- Membership: applicants, 102, 176, 296, 392, 523, 637; changes in, 176, 392, 638; electees, 55, 102, 296, 331, 451, 523, 637; Life (Foley, O'Donnell), 56
- Midwinter Seminar, fifth, bet. 30 and 31; see President's Page, 269; sixth, 579
- Nichols Award for laymen, designee, 400, (photo) 571; recipient, 691
- Officers, nominated, 222; elected, 336
- Pension Plan, trustee appointed, 50
- President, biography (photo), 387; see President's Page
- President's Night, 148, 344
- Representatives: advisory committee, Goodwill Industries, 169; chairmen of state committees on industrial health, 234; committee of consultants for Hall of Health, 50; Committee on Regulations for Placement of Children in Family Homes, 640; Congress on Industrial Health, AMA, 50; Georgetown Chapter, Student AMA, 698; National Conference on Citizenship, 464; National Health Fair, executive committee, 39; Poliomyelitis Advisory Committee to D. C. Department of Public Health, 274; United Community Services: Board of Trustees 291, Community Home Makers Committee 291, Health Section 400, project committee for study of blind 169; Washington Academy of Sciences, 50, 220
- Sections:
  - Officers, 414; meeting schedule, 588
  - Anesthesiology, 49, 168, 344
  - Gastroenterology, 49
  - General Practice, 109, 229
  - Internal Medicine and Allied Subspecialties, proposed, 291; first meeting, 344
  - Neurology and Psychiatry, 109, 344; Chairman's Address, 515; request for change of name, 463
  - Ophthalmology, 49, 696
  - Radiology, 463
- Seventeen Ten M Street, plans for remodeling, 690
- Speakers to lay groups, 54, 175, 235, 286, 353, 404, 517, 638, 701
- Student AMA Chapters, contributions to, 290
- Surveys: Social Security coverage, 219, (Observer) 36, 211; proposal for Blue Shield coverage, 697
- TV program, first closed-circuit, in building, 230
- Washington Science Fair, contributions to, 169, 640

Medical Societies and Allied Organizations, national, international and regional:

- Aero Medical Association, annual meeting, 289
- American Academy of General Practice, annual meeting, 109, 284; new building, 580; see Editorial, 89
- American Academy of Obstetrics and Gynecology, District IV meeting, 168
- American Academy of Ophthalmology and Otolaryngology, annual meeting, 695
- American Association of Medical Clinics, annual meeting, 696
- American Cancer Society, fellowships, 464; grants, 642
- American College of Cardiology, clinical workshop, 292
- American College of Physicians, Mr. Loveland elected fellow, 402
- American College of Surgeons, Clinical Congress, 694
- American Hearing, new headquarters, 110

  - American Heart Association, annual meeting, 170; Blakeslee Awards to Washington science writers, 643; guide for operating blood vessel banks, 170
  - American Medical Association: annual session, 288, 459, (delegates' report) 442; clinical session, 639, 694, (delegates' report) 40; Dr. Holland, new secretary of Council on Industrial Health, 348; new officers, 442; President-elect Allman (photo), 459, 460; Principles of Medical Ethics (Observer), 276, revised copy to House of Delegates, 445; Public Relations Department: see Editorial, 620; Dr. White, new secretary of Council on Foods and Nutrition, 521
  - American Medical Education Foundation: see Editorial (Fitzgerald), 506
  - American Psychiatric Association, Mid-Atlantic Regional Research Conference, 169
  - American Society of Internal Medicine, organized, 640
  - American Therapeutic Society, 463
  - Association of Military Surgeons of the United States, annual convention, 695
  - Guild of Prescription Opticians of America, fellowships in ophthalmology, 292
  - Halsted, annual meeting, 346
  - International Congress of Otolaryngology, 464
  - National Council on Infant and Child Care, organized, 579
  - National Disease and Therapeutic Index, 446
  - National Foundation for Infantile Paralysis: new medical director, 643; see Editorials, 34, 273
  - National Neurological Foundation, organized, 520
  - National States Conference on Alcoholism: Physicians Institute on Alcoholism, 229
  - Southeastern Surgical Congress, annual award, 400
  - Southern Medical Association: Golden Anniversary Meeting, 291, 519, 567, 690; history, 568; officers, 568, 691, (photos) 567; program for D. C. Day, 569-70; Washington Committee on Arrangements, 572; see Editorial (McKenzie), 558
  - Southern Pediatric Seminar 462
  - Southern Psychiatric Association, Washington meeting, 639
  - Symposium on Antibiotics, 291
  - World Medical Association: some accomplishments, 576

- **Medical Societies and Allied Organizations, local and vicinity:**
  - Officers and meeting schedule, 587–8
  - American Academy of General Practice, District Chapter, 169, 288, 697
  - American Cancer, District Division, 290, 400; anniversary meeting, 696; grants awarded, 521
  - American College of Chest Physicians, Potomac and Southern Chapters, combined meeting, 573
  - American Medical Writers' Association, Mid-Atlantic Chapter, organized, 346
  - Anesthesiologists, 49, 168, 344
  - Arlington County, 230, 522
  - Dental, 463; Postgraduate Clinic, 233
  - Diabetes Association: see Editorial (Moss), 558; Clinical Section, 169
  - Fairfax County, 640
  - George Washington University, 109, 232, 347, 399
  - Georgetown Clinical, 347
  - Graduate Nurses' Association, new fee schedule, 391
  - Hahnemann Alumni Association of National Capital Area, organized, 696
  - Hospital Association, organized, 580
  - Hospital Council (of National Capital Area, Inc.): see Editorial (Bucher), 621
  - Jacobi, 109, 347, 399, 640, 697
  - Louis Mackall, 229
  - Maryland-D.C.-Delaware Hospital Association, 698
  - Medico-Chirurgical, 168
  - Metropolitan Washington Tuberculosis Conference, 289, 697
  - National Cystic Fibrosis Research Foundation, D.C. Chapter, 642
  - National Nephrosis Foundation, Greater Washington Area Chapter, 642
  - Northern Virginia Academy of Surgery, organized, 110; meetings, 519, 697
  - Prince Georges County, 111
  - Rheumatism, 290
  - Saint Elizabeths Hospital, annual meeting, 288
  - Silver Spring Academy of Medicine, reactivated, 231
  - Smith-Reed-Russell, 290
  - Society of Internal Medicine, organized, 640; see Editorial, 680
  - Society for Crippled Children, 230; annual report (Argy), 631
  - Trudeau, 346, 399
  - Tuberculosis Association, 399
  - United Community Services, 290; Health, Welfare and Recreation Conference, 351
  - Virginia Academy of General Practice, postgraduate course, 230
  - Washington Academy of Neurosurgery, organized, 400
  - Washington Board of Trade, Public Health Committee, 290
  - Washington Gynecological, 229
  - Washington Hearing, 350
  - Washington Heart Association: annual meeting, 462; research fellowships and grants, 292, 353, 464, 521, 579, 641; Scientific Council, 49, 230
  - Washington Homeopathic, 696
  - Washington Orthopedic, 110
  - Washington Psychiatric, 49, 109, 229, 289, 579, 697
  - William Beaumont (George Washington University), annual dinner, 347
  - Women's, 399, 639, 701
- **Meetings,** schedule of, Metropolitan Area, 50, 110, 169, 230
- **Meiling, R. L.,** elected president of Ohio State Medical Association, 350
- **Michela, B. J.,** appointed medical director, Davis Memorial Goodwill Industries, 232
- **Mitchell, E. C.,** moderator, Course in Disaster Medicine (photo), 396
- **Moffett, D. B.,** named professor emeritus of otolaryngology, George Washington University, 404
- **Monat, H. A.,** appointed Governor for D. C. of American College of Gastroenterology, 173
- **Montgomery, R. R.:** see On the Lighter Side (photo), 518

Moran, R. E., elected to Examining Board of American Board of Plastic Surgeons, 403; elected president, Ex-plastic Surgery Fellows of Mayo Foundation, 699
Morch, E. T., appointed professor and director of anesthesiology, University of Chicago, 175
Morris, W. R., elected to Executive Board, Medical Society of D. C., 336; see Annual Business Meeting, proceedings of, 332, 337; President's Night, 344, (photos) 345, 346; President's Page
Murphy, J. P., elected fellow of International College of Surgeons, 581
Mutual of Omaha, Criss Award, 51

N

Narcotic Act, changes re oral prescriptions, (Donaldson and Kinner) 513
National Disease and Therapeutic Index (nation-wide medical statistical research program), 446
National Health Fair: director, 40; committee chairmen and vice chairmen, 40; executive committee, 39; see In and Out of Focus, 39
National Library of Medicine, established, 519; see Armed Forces Medical Library
Neuman, W., elected to Smith-Reed-Russell Society, 290
Neviaser, J. S., honored by George Washington University alumni, 295
Nicholson, M. M., designee for Certificate for Meritorious Service of D. C. Medical Society, 400, (photo) 571; recipient, 691
Nicklas, E. W.: see Medical Service of the District of Columbia
Nolan, J. J., elected fellow of American College of Surgeons, 695
Nurses, private duty, new fee schedule, 391

O

Obituaries:
- Baker, R. W., 584
- Christie, A. C. (photo), (McPeak) 470
- Custis, M. A., 409
- Fishman, S., 409
- Henning, C., 650
- Hildenbrand, E. J. C., 355
- Hynson, L. M., 410
- Jamison, B. L., 297
- Jarvis, L., 298
- Kelley, C. H., 237
- Lamb, R. S., 237
- Lloyd, J. R., 469; In Memoriam (Stevenson), 469
- Mallory, W. J. (photo), 524; A Eulogy (Kayser), 524
- Martin, J. W. (Osbourn), 408
- Polkinhorn, H. A., 527
- Tewksbury, W. D., 115
- Trinder, J. H., 58

Obituaries, nonmembers:
- Bowling, G., 111
- Kimbrough, J. C., 585
- Leahy, W. E., 465
- MacEachern, M. T., 170
- Rabil, P. J., 527

On the Lighter Side (Kadan):
- Barger, G. J. P., square dance enthusiast, 693
- Cobb, W. M., fisherman (photo), 693
- Medical Bowling League, 48, 106, 397, 578, 636
- Montgomery, R. R., bow-and-arrow hunter (photo), 518
- Pfizer Physicians' Golf Tournament, 452
- Resta, G. A., physician to Washington Baseball Club, 228
- Seasonal observations, 48, 106, 166, 636, 693
- Woman's Auxiliary Bowling League, 287

Ormandy, L., elected fellow of American College of Surgeons, 53
Ottenberg, G., honored by George Washington University alumni, 295
Overholser, W., decorated with Haitian Order, 700; reëlected president of Washington Institute of Mental Hygiene, 352

P

Parks, J. L., elected vice president, American College of Obstetricians and Gynecologists, 700
Parrott, R. H., named physician-in-chief, Children's Hospital, 466
Passarelli, A. F., elected fellow of American College of Surgeons, 53
Payne, H. W., appointed to D. C. Professional Vocational Rehabilitation Advisory Council, 293
Peabody, J. W., Sr., chairman, Council on Postgraduate Medical Education, American College of Chest Physicians, 581; elected honorary member of Alpha Omega Alpha, 581; reëlected to Board of Directors, National Tuberculosis Association, 581
Perkins, R. B.: The Administration's (HEW) activities in health, 103
Perkins, W. R., appointed to Board of Trustees, Medical Service, 220
Pfizer Laboratories, sponsor of dinner honoring Lt. Dooley, 289; preëlection TV program, 697
Pincock, C. S., honored by Women's Medical Society (photo), 701
Pincock, G., appointed medical officer, National Bureau of Standards, 53

President's Page:
- Forecast for 1956 (Morris), 30
- Hospital Accreditation, 88
- President's Night, 148
- Committees at Work, 206
- Seminar Firmly Established, 269
- Honor the Living, 325
- Another Administration in the Making (Caulk), 384
- Golden Anniversary, 437
- Vacation Days Are Over, 502
- Dependents' Medical Care Act, 557
- Medical Service and Our Doctors, 618
- Our Health Department, 679

Public Health:
  Community Health Week, 100
  Diabetes Week, 558, 698
  Poliomyelitis vaccine, 461; see Editorial (Van Riper), 273, reports of Executive Board, 339, 461
Pugh, L., retired from Navy, 522; appointed physician to George Washington University, 644
Putnam, L. E., resigned from Food and Drug Administration, 700

R

Reede, E. H., recipient of medallion from Johns Hopkins University (photo), 233
Reisinger, J. A., elected president of medical staff, Emergency Hospital, 347
Resta, G. A.: see On the Lighter Side, 228
Rodis, I., honored by Eastern High School Alumni Association, 405
Ryland, C. P., elected to Board of Censors, D. C. Medical Society, 336

S

Scheele, L. A., reappointed Surgeon General of Public Health Service, 350, resigned, 465; president, Warner-Chilcott Laboratories, 465
Schreiber, J., elected to Board of Directors, National Association for Mental Health, 234
Schwartzbach, S., elected fellow of International College of Surgeons, 581
Science for Youth, (Davis) 167
Science Writers (Carey and Haseltine) honored by American Heart Association, 643
Scott, R. B., elected fellow of American Academy of Allergy, 174
Seckinger, D. L., to retire as D. C. Director of Public Health, 403
Shafer, J. C., elected to Board of Directors, American Academy of Dermatology and Syphilology, 113
Sheppard, E. A. W., honored by George Washington University alumni, 295
Shields, C. D., appointed Associate Dean of Georgetown University School of Medicine, 643; appointed to VA Special Medical Advisory Group, 644; appointed Vice Chairman, Council on Rehabilitation, 50
Simpson, G. V., appointed ophthalmologist to D. C. Commissioners' Traffic Advisory Committee, 579; honored by American Academy of Ophthalmology and Otolaryngology, 695
Smith, R. S., elected fellow of American College of Surgeons, 53
Steiner, S. A., appointed medical officer to Alcoholic Rehabilitation Division, D. C. Department of Health, 114
Stevens, H., appointed to D. C. Professional Vocational Rehabilitation Advisory Council, 293; elected to Smith-Reed-Russell Society, 290
Stieglitz, E. J., lecturer at Merrell Gerontological Symposium on Constructive Medicine in Aging (photo), 209; Messenger Lecturer at Cornell University, 54
Stubbs, D., cited by George Washington University Medical Society (photo), 232; reappointed to Board of Trustees of Medical Service, 220; reëlected President of Medical Service, 345; see Medical Service of the District of Columbia
Sugar, S. J., elected fellow of American College of Surgeons, 695

T

Taggart, S. R., speaker, Course in Disaster Medicine (photo), 396
Talbot, J. A., honored by Garfield Hospital staff, 345
Tobin, W. J., appointed to D. C. Professional Vocational Rehabilitation Advisory Council, 293

U

U. S. Children's Bureau: Dr. Eliot, Chief, retiring (photo), 698
U. S. Department of Defense:
  Appointments to office: Colonel Mason, Commandant, Walter Reed Army Institute of Research, 521
  Dependents' Medical Care Program: see President's Page, 557, report of Executive Board, 689; contract negotiations, 697; executive director appointed, 698
  Revised promotion policies for Army officers, 51
  Surgeon General of Army: monthly medical meetings, 579, 639
U. S. Department of Health, Education and Welfare:
  Administration's activities in health, (Perkins) 103
  Appointments to office: Dr. Burney, Surgeon General, PHS (photo), 519, 520; Dr. Coggeshall, Special Assistant for Health (photo), 169, 170; Dr. Cronin, Chief, Bureau of Medical Services, 699; Dr. Hunt, Director, Center for Aging Research, 698; Dr. Masur, Director, Clinical Center, [698; Dr. Porterfield, Assistant to Surgeon General of PHS, 643
  Birth, death and stillbirth certificates revised, 46
  Center for Aging Research, established, 698
  Chemotherapy of cancer, bibliography available, 520
  Clinical Center, referrals requested, 165
  Food and Drug Administration: brochure re food and drug poisoning, 400; joint hospital study on drug reactions, 630
  International Certificates of Vaccination, 391
  National Cancer Institute co-host to New England Cancer Society, 110
  Dr. Salk awarded Congressional medal by Secretary Folsom (photo), 171
  Social Security Law, "disability freeze" program: see Editorial (Farrell), 271
U. S. Smithsonian Institution, Roentgen X-ray tube presented to (photo), 574
Upjohn Company, *Scope*, 111; sponsor of TV Grand Rounds 230, 697 (photo, 692)

V

Veal, J. R., appointed chairman, executive committee, National Health Fair, 39

Veterans Administration:

- Appointments to office: Dr. Barnwell, Assistant Chief Medical Director for Research and Education, 293; Dr. Kennedy, Director of Surgical Service, 232; Dr. Tucker, Director of Tuberculosis Service, 348
- Bradley report (Observer), 562

W

Waite, C. P., appointed to D. C. Professional Vocational Rehabilitation Advisory Council, 293

Watts, J. W., elected president-elect of Medical Society of D. C., 336; photo, 567

Weinstein, J. J., elected fellow of American Medical Writers' Association, 644; elected president-elect of International Academy of Proctology, 350

Wells, R. L., elected vice chairman of Conference of State Chairmen of Committees on Industrial Health, 234; honored by Chesapeake and Potomac Telephone Company, 522

White, C. S., Sr., elected honorary fellow of International College of Surgeons, 581

Wilson, F. E., reëlected vice president and secretary of Board of Directors, Joint Blood Council, 521

Wiprud, T. (Observer), see In and Out of Focus; appointed to Conference on Hospital-Physician Relationships and Prepayment Principles by Columbia University, 640; director, National Health Fair, 40; see Annual Business Meeting, Secretary's Report, 334; see reports of delegates to AMA on clinical session, 40, annual session, 442

Wise, C. S., appointed to D. C. Professional Vocational Rehabilitation Advisory Council, 293

Woman's Auxiliary to the Medical Society of the District of Columbia: Bowling League: see On the Lighter Side, 287; committee chairmen, 576; flag presented to Medical Society (photo), 345; notes, 114, 164, 218, 285, 354, 450, 575; officers, 218, 576; president (photo), 575

Wooldridge, W. N., appointed director, Bureau of Laboratories and Pharmacies, D. C. Health Department, 467

Workmen's Compensation Laws, (Crook) 453

Y

Yater, M.: Second National Conference on Spiritual Foundations, 47

Yater, W. M., elected Secretary General of American College of Physicians (photo), 349; see Editor's silver anniversary (Observer), 683; see reports of Executive Board, 219, 332, 337

41C 1263